66

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The OIL and GAS JOURNAL

PRODUCING REFINING MARKETING

Published Every Thursday TULSA, OKLAHOMA, NOVEMBER 24, 1927 $6.00 a Year

150 Pounds Pressure CRANE VALVES 2500 Pounds Pressure

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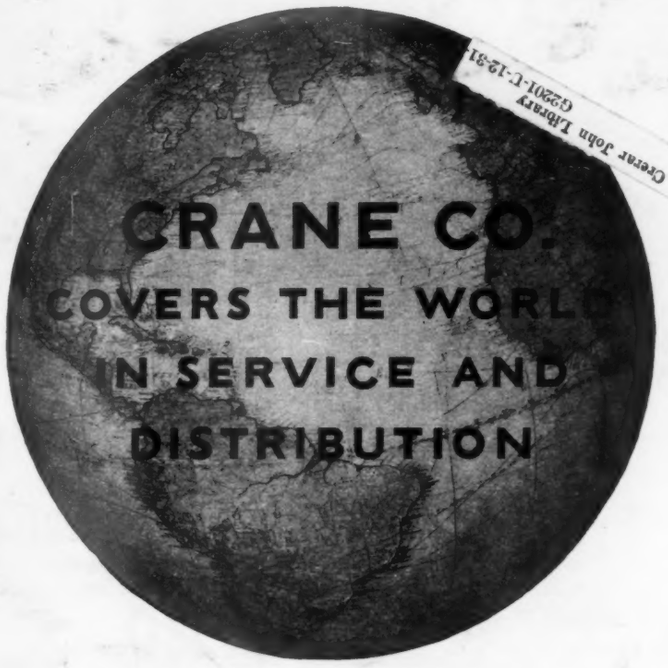

As oil men have penetrated, in their search for new fields, to remote corners of the globe, they have found Crane materials and Crane service never far away.

In Mesopotamia, where civilization began, oil men faced by a need for valves telegraph to Crane Co. at Bombay. In Mexico, the native workmen when Crane Co. is mentioned say instinctively: "Valvulas."

Crane factories in eight cities of the United States, Canada and England; Crane branches and sales offices in 162 cities of the United States, Canada, Mexico, Cuba, Great Britain, France, Belgium, India, and Ceylon; give uninterrupted distribution.

World penetration is not attained without underlying merit. To engineers in far-off places, as to American oil men, the word Crane has come to mean dependability in piping materials.

CRANE

Address all inquiries to Crane Co., Chicago

GENERAL OFFICES: CRANE BUILDING, 836 S. MICHIGAN AVENUE, CHICAGO

Branches and Sales Offices in One Hundred and Sixty-two Cities

National Exhibit Rooms: Chicago, New York, Atlantic City, San Francisco, and Montreal

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CRANE-BENNETT, LTD., LONDON

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Advertisers' Index on Page 29 Table of Contents on Page 30

Hold the WATCH on It!

Check it up with tachometer and stop-watch! Goodrich "1788 Highflex" is the ideal belt to reduce slippage and insure uniform speed on every type of machinery in which close speed-regulation is an important factor.

Although built of heavy, hard-woven canvas which enables it to handle the heaviest loads, "1788 Highflex" bends so easily—because of its "free edge" foldless construction—that better contact and minimum slippage are assured, even on small pulleys.

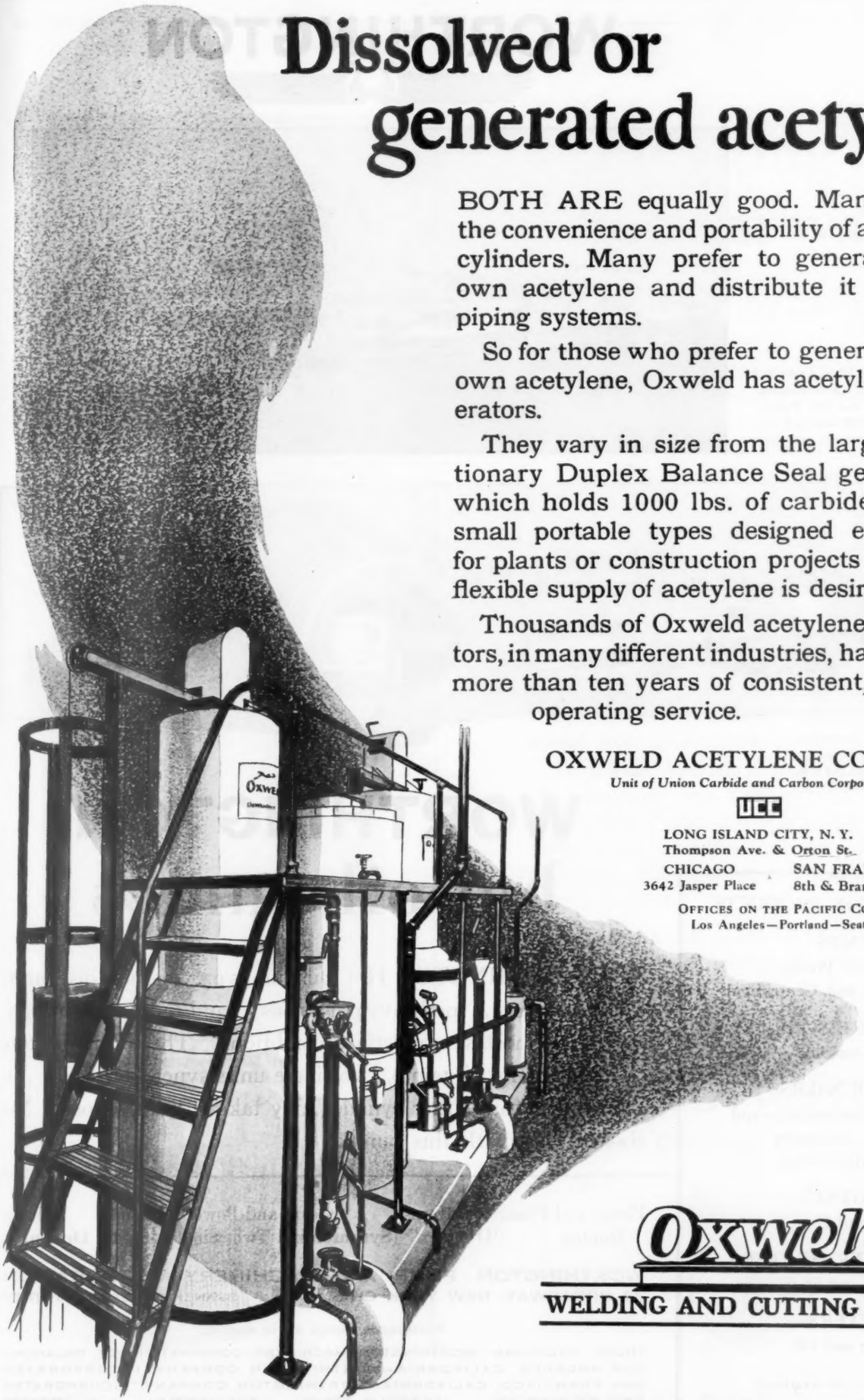
This greater flexibility—and greatly reduced stretch—minimize shut-downs and burnt-out bearings. It's *the* belt for long life and minimum cost—specify "1788" Highflex" for your most difficult drives, and all your other drives!

Free bending of ply on ply.
No folds in the fabric.
No seams to open up.
No ply separation.
No bootlegging.
Made of strongest belt duck—50% less stretch.
Compact weave of fabric gives better anchorage—fasteners won't pull out.
Not affected by atmospheric changes.
Longer life.
Send for folder of valuable horse-power and pulley data.

THE B. F. GOODRICH RUBBER COMPANY
Established 1870 Akron, Ohio

Goodrich
"1788 Highflex" Belt

Dissolved or generated acetylene?



BOTH ARE equally good. Many prefer the convenience and portability of acetylene cylinders. Many prefer to generate their own acetylene and distribute it through piping systems.

So for those who prefer to generate their own acetylene, Oxweld has acetylene generators.

They vary in size from the largest stationary Duplex Balance Seal generator, which holds 1000 lbs. of carbide, to the small portable types designed especially for plants or construction projects where a flexible supply of acetylene is desired.

Thousands of Oxweld acetylene generators, in many different industries, have given more than ten years of consistent, reliable operating service.

OXWELD ACETYLENE COMPANY
Unit of Union Carbide and Carbon Corporation

UCC

LONG ISLAND CITY, N. Y.
Thompson Ave. & Orton St.

CHICAGO
3642 Jasper Place

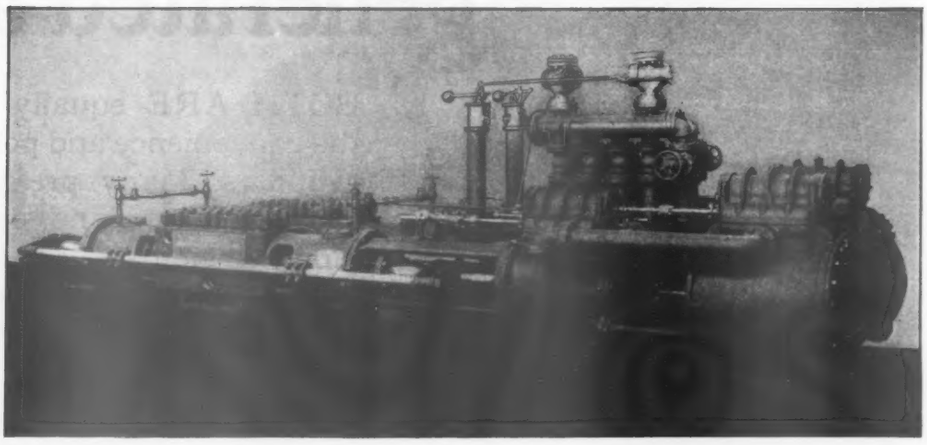
SAN FRANCISCO
8th & Brannon Sts.

OFFICES ON THE PACIFIC COAST
Los Angeles—Portland—Seattle

Oxweld
WELDING AND CUTTING APPARATUS

The Oil and Gas Journal, issued weekly by The Petroleum Publishing Company, 114-116 West Second Street, Tulsa, Oklahoma. Subscription price $6.00 a year; 15 cents a copy. Entered as second-class mail matter December 15, 1911, at the post office at Tulsa, Okla., under the Act of March 3, 1879

WORTHINGTON



Worthington 20-in. and 30-in. by 6-in. by 24-in. Horizontal Compound "Duoplex" (Synchronized Twin Single) Packed-plunger Hot Oil Pump. Capacity, 200 gal. per min. of 1000 degrees F. oil against 1500 lb. per sq. in. discharge pressure.

Worthington 4¾-in. by 18-in. Horizontal Duplex Power-driven Packed-plunger Hot Oil Pump. Capacity 200 gal. per min. of 1000 degrees F. oil against 1200 lb. per sq. in. discharge pressure.

WORTHINGTON PRODUCTS

PUMPS
Steam and Power
Reciprocating and Centrifugal

COMPRESSORS
Air, Gas and Ammonia—Air Lifts

CONDENSERS
Surface, Jet, Barometric—and vacuum auxiliaries
Steam-Air Ejectors

ENGINES
Oil and Gas

FEEDWATER HEATERS
Locomotive and Stationary

METERS
Water and Oil

Literature on request

WORTHINGTON hot oil pumps

WORTHINGTON Hot Oil Pumps provide even discharge pressure... no heavy pulsations... and full rated capacity under the most severe service conditions. The Worthington "Duoplex" (Trade Mark) hot oil pump, two single units synchronized . . . is arranged so that either cylinder may take the entire load. No choked lines with this pump.

39-6135-6

Piston and Plunger Patterns Steam and Power Driven Single Duplex "Duoplex" (Synchronized Twin Single—Steam Driven)

WORTHINGTON PUMP AND MACHINERY CORPORATION
115 BROADWAY, NEW YORK CITY BRANCH OFFICES IN 24 CITIES

Worthington Pumps are in stock at:

TULSA, OKLAHOMA – WORTHINGTON MACHINERY CORPORATION OF OKLAHOMA
LOS ANGELES, CALIFORNIA – WORTHINGTON COMPANY, INCORPORATED
SAN FRANCISCO, CALIFORNIA – WORTHINGTON COMPANY, INCORPORATED
NEW ORLEANS, LA. HOUSTON, TEXAS AMARILLO, TEXAS BORGER, TEXAS SAN ANGELO TEXAS } A. M. LOCKETT AND COMPANY

Stuffing Cartridge Container with Eagle Lead Wool—as easily as you would handle ordinary rope

The Cartridge Container stuffed with Eagle Lead Wool, ready to be lowered at the end of tools to the battle ground of water

Write for this interesting booklet FREE

Plugging off bottom water

—the money saving method

THERE is no time for slow methods when bottom water comes into a well. But economy is a necessary consideration—and Eagle Lead Wool is economical for two reasons:

First, only as much lead wool as needed is shot to the battle ground of water. One cartridge or five—there is no waste.

Second, it shuts off water completely, immediately. Eagle Lead Wool is stuffed into a special cartridge container, developed by Eagle-Picher, and lowered into the well. Under pressure, the loose spongy wool is forced through the meshes of the container and becomes a plug of pure lead. No cracks or crevices are possible, no corrosion from alkaline water.

Eagle Lead Wool is as easy and quick to handle as ordinary rope. You can order it from your dealer, who stocks the Special Cartridge Container in all sizes. Or write direct to Eagle-Picher at Joplin. Free descriptive booklets will be sent on request.

The EAGLE-PICHER LEAD COMPANY
Chicago · Joplin · Cincinnati

EAGLE LEAD WOOL

and Cartridge Containers

Producers of lead and allied products · Eleven Plants · Branches in all principal cities

JENKINS CRACKING PROCESS

PRODUCES QUALITY GASOLINE

Facts from performance

Without auxiliary equipment Jenkins Cracking Plants will produce maximum yield of gasoline at lowest cost from—

Crude Oil

Topped Crude

Gas Oil

Residium

GRAVER *Founded 1857* *Corporation*

EAST CHICAGO, INDIANA

NEW YORK Grand Cent. Term. | CHICAGO America Fore Bldg. | TULSA Atlas Life Bldg. | HOUSTON West Building

The Improved SELF LUBRICATING WICO MAGNETO

ONE year and eight months ago this magneto was put on test in the Wico laboratories.

Now after fifty of the improved magnetos have been on duty in the oil fields for an eight months period—Wico engineers are satisfied.

More than ever before Wico magnetos are adapted to give maximum satisfaction under the grind of oil field service.

This improved Wico needs no oil or adjustment. The danger of over oiling or under oiling is therefore eliminated.

Specially designed pads of highly absorbent felt hold the oil supply. Wicks carry the oil to any surface needing lubrication in exactly the right quantity.

Factory Branch—121 West 8th St., Tulsa, Okla.

Convert Your Present Wicos

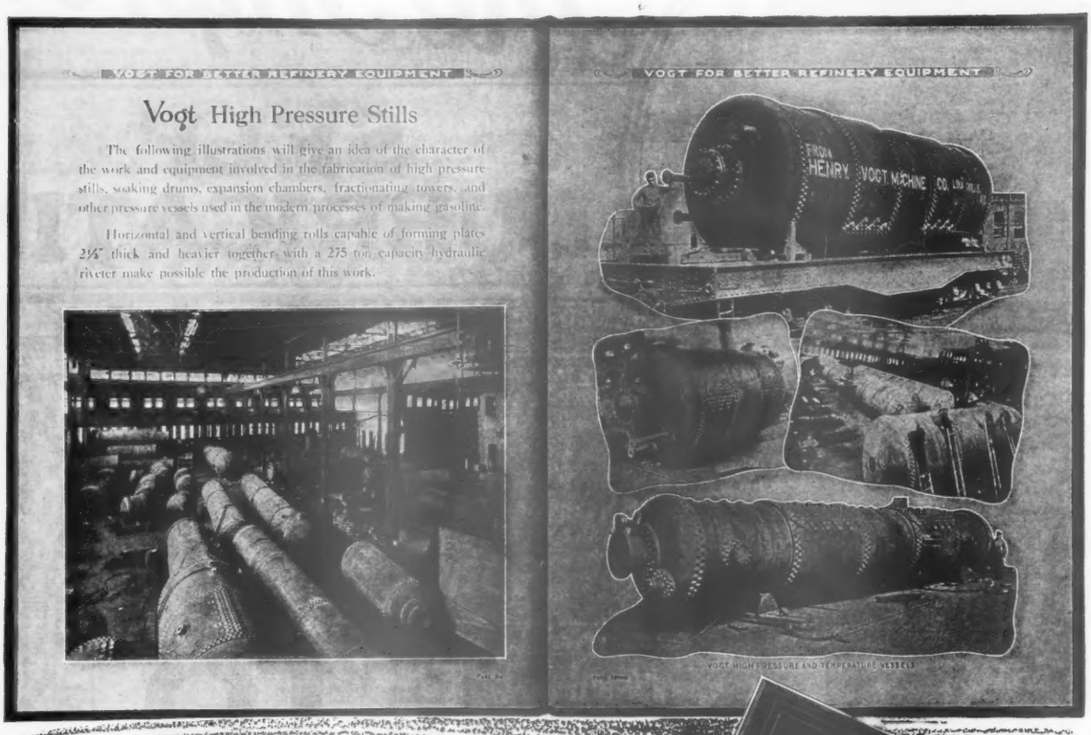
A method has been developed for converting all Wico OC Magnetos to this new model. For your convenience this will be done when repairs are needed, for an additional charge of one dollar.

Mail This Coupon for Details

We will gladly give you full information about the improved Wico if you will fill in and mail this coupon to us.

WICO ELECTRIC CO.
Springfield, Mass.
Send me full details regarding the improved OC Wico Magnetos.
Magneto. We have
How can they be converted to the new type?
Name
Company
City
County
State

WICO ELECTRIC COMPANY, SPRINGFIELD, MASS.


VOGT FOR BETTER REFINERY EQUIPMENT
Vogt High Pressure Stills
The following illustrations will give an idea of the character of the work and equipment involved in the fabrication of high pressure stills, soaking drums, expansion chambers, fractionating towers, and other pressure vessels used in the modern processes of making gasoline.
Horizontal and vertical bending rolls capable of forming plates 2¼" thick and heavier together with a 275 ton capacity hydraulic riveter make possible the production of this work.
VOGT FOR BETTER REFINERY EQUIPMENT
HENRY VOGT MACHINE CO.
VOGT HIGH PRESSURE AND TEMPERATURE VESSELS

"Your New Bulletin On Refinery Equipment Inspires Confidence In Vogt Products"

This statement is an extract taken from a letter received from the manager of one of America's Largest Refinereis.

This new bulletin on "VOGT Products for the Refinery" will impress you likewise. If you failed to receive a copy, Write us today.

BRANCH OFFICES:
NEW YORK
CHICAGO
CLEVELAND
DALLAS
PHILADELPHIA

HENRY VOGT MACHINE CO.
INCORPORATED
LOUISVILLE, KY.

Manufacturers of: Oil Refinery Equipment, Drop Forged Steel Valves and Fittings, Water Tube and Horizontal Return Tubular Boilers, Ice Making and Refrigerating Machinery.

The No. 1A is the same as the No. 1 except that it is equipped with a ratchet for work where space is restricted.

No. 1A Nye Receding Pipe Threader, complete .....$12.00 net
West of Rocky Mountains.....$13.50

A LETTER FROM HARRY G. NYE

TO THE OIL MEN OF THE U. S. A.
Fellow Citizens:

We are in the midst of the football season, which means that the left end is in the midst of the right half. Twenty-two young men, and more as needed, are out there in the field fighting for the glory of their school, or something, it doesn't matter to them, as long as they are fighting. All honor to them. A couple of pugs push each other around a ring for forty minutes and get a million dollars. A couple of boys push each other around a field a couple of hours and get a black eye or a cracked shin, or both. The difference between professional sport and amateur sport is anywhere from nothing to $1,000,000 a night. But a bigger difference yet is that the man who fights only for glory gets all the best of it.

I am not opposed to football. Neither am I opposed to a steam-roller or a twenty-ton truck. I have no intention of getting in the way of either of them. I let my boy play football. *He said he was going to,* so I let him. I hope sometime to see him come into this business, and I figure that football is just the thing to fit him for it. It may even be rough enough to make a plumber of him. If he can dive in among forty-four arms and legs and come up with the ball, it may be that sometime he will land the job for the courthouse plumbing. If he can make seven yards with a couple of football teams draped around his neck, I figure he may be able to carry a plumbing shop's overhead.

Football is a wonderful game. So is the plumbing business. Two or three or four, or maybe more, fellows try to take the ball away from each other, or the new sewer extension, or whatever it may be, and call each other names, and tear each others' hair, and make each other mad, while the general public stands on the sidelines and shrieks with delight, and no wonder. It isn't their ears that are getting torn, or their noses that are getting bloody. All they furnish is the ball. No wonder they laugh.

What we ought to do, when a bunch of plumbers are fighting for a contract like a bunch of boys for a football, is to hire a field and at least make the public pay admission. Then the plumbers ought to take the gross receipts and spend them for Nye pipe tools, which, as you know, work faster and easier and last longer than any other pipe tools on earth. If the public sics us on each other, it ought to pay to see the show.

Yours for bigger purses for plumbers,
HARRY G. NYE.

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HARRY G. NYE
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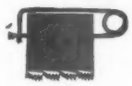
Otherwise Known as
THE NYE TOOL & MACHINE WORKS
4120-30 Fullerton Ave., Chicago, Ill.



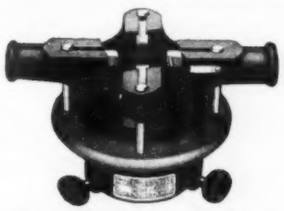
Nye Chasers

Fit Nos. 1-1A and 2 Nye Receding Die Stocks

Each set is guaranteed in every particular. Will cut much easier than other similar dies.
No. 1, 1" to 1¼" .....$ .75 per set net
No. 1, 2" ..... 1.25 per set net
No. 2, 2½" to 4" ..... 3.60 per set net

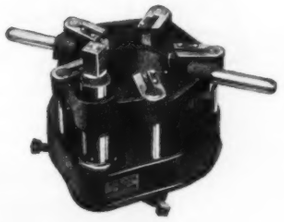
Nye Bit Brace Reamer

Reams from ⅛ to 1¼ inches inclusive.
NET PRICE $1.17
ABSOLUTELY GUARANTEED



The rugged construction and few working parts account for the simplicity and durability of these Nye Receding models. They do the work easily and efficiently.

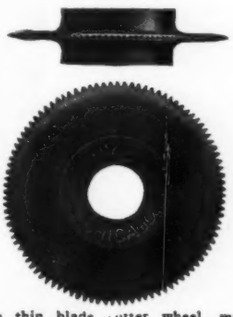
No. 1 Nye Receding Pipe Threader, complete .....$9.60 net
West of Rocky Mountains $10.80



Nye No. 2 Geared Threading Device

Improved

Capacity 2½ in. to 4 in. inclusive. This tool has the same rugged construction as the No. 1 and No. 1A Nye Receding Stocks. A ratchet handle and a spider hub threaded for 1-inch pipe is furnished as standard equipment.
Net price complete $50.00
West of Rocky Mountains 55.00
FREE TRIAL—ABSOLUTELY GUARANTEED



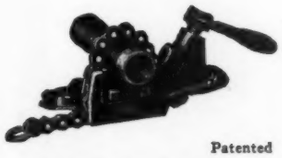
Nye thin blade cutter wheel, made to fit all standard makes of pipe cutters, and guaranteed against breakage in use. Made both in smooth and knurled edge.

Nye Saunders Pipe Cutters

No. 1	$ 1.80 net
No. 2	2.70 "
No. 3	6.60 "
No. 4	10.80 "
No. 5	16.80 "

New Type Self-Locking Vises

No. 00	$2.82 net
No. 10	3.34 net
No. 20	5.00 net
No. 30	7.33 net



Patented

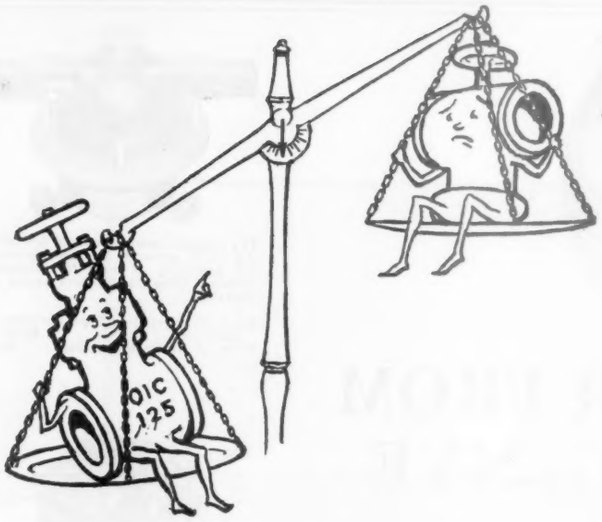
The New Nye Chain Vise

A handy, compact little vise, possessing maximum strength, while of minimum weight. Easily carried in tool kit. Equipped with standard jaws. Having features not found in similar vises, the double lever tightening device being above the bench, rather than below, insuring faster and smoother operation.

No. 51 Capacity ⅛ to 2½". Net $ 4.67
No. 52 Capacity ¼ to 4". Net 10.00
ABSOLUTELY GUARANTEED

Nye Barnes Pipe Cutters

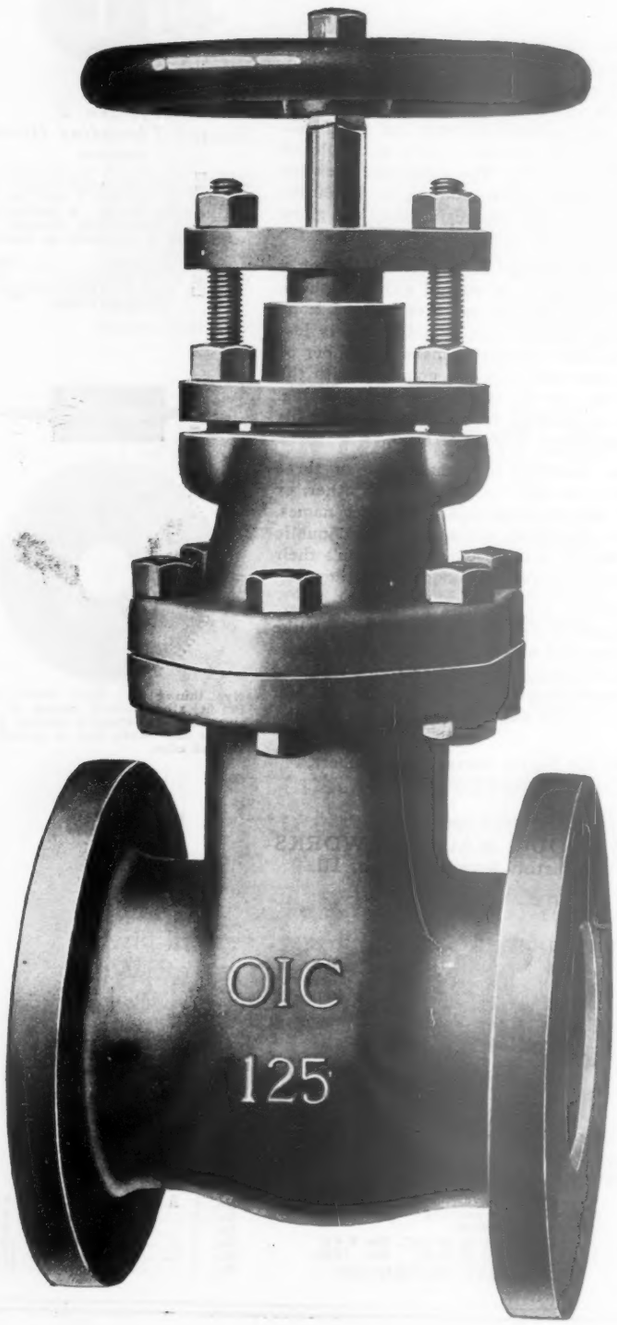
No. 1	$ 2.25 net
No. 2	3.00 "
No. 3	5.00 "
No. 4	10.00 "
No. 5	15.00 "
No. 6	20.00 "



Built *HEAVIER* and *STURDIER*

for

Extra Long Service under Severe Operating Conditions



O. I. C. Standard Iron Body Gate Valves average much heavier than most valves of corresponding sizes. Their special composition metal, larger stem diameter and high factor of safety make these exceptional valves a sound business investment under all conditions.

Standard, medium and extra heavy 125-pound O. I. C. Gate Valves cover the complete range of types and sizes from 2 to 16 inches, inclusive. Their perfect seating surface, greater thread contact and correct proportions eliminate the need for frequent replacement.

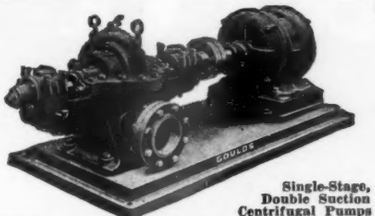
Judged from a performance basis, the long life, ease of operation and trouble-free service of dependable O. I. C. Valves pay dividends far in excess of their slight additional cost.

Our completely illustrated 277-page catalog giving complete details of O. I. C. Valves for every requirement of the petroleum industry will be sent promptly on request.

OIC

THE OHIO INJECTOR COMPANY
WADSWORTH, OHIO

O. I. C. Valves are Carried in Stock and Distributed in the Mid-Continental Field by International Supply Company, Tulsa, Oklahoma and Branches



Single-Stage, Double Suction Centrifugal Pumps

Capacities 50 to 4400 g.p.m. For 100 lbs. average max. working pressure. Standard fitted; bronze fitted; all iron, or all bronze. For direct connection to motor, steam turbine and gasoline engine, or with pulley for belt drive. See Bulletin 125.

GOULDS PUMPS

for

every Pumping Condition in the Oil Industry

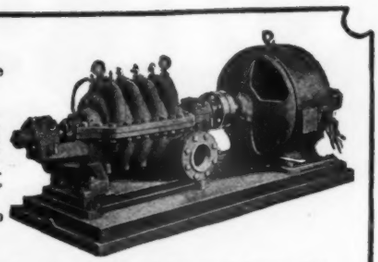
There is a standard type and size Goulds Centrifugal or Reciprocating Pump for almost every oil pumping condition: gathering, station, refinery and Pumps for all process work.

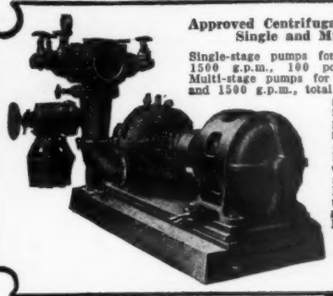
Unnecessary types and sizes are eliminated. This means a greater capacity to serve you with pumps built in volume and carried in stock. Improved design affords efficient, economical operation. Modern manufacturing facilities insure quick shipment and prompt service.

GOULDS PUMPS, Inc.
Seneca Falls New York

Multi-Stage Centrifugal Pumps

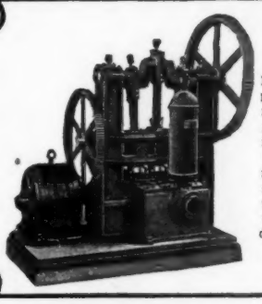
A new pump of volute construction with exceptionally high efficiencies. In 3 in. to 8 in. sizes, and 2 to 6 stages Capacities 60 to 2000 g.p.m. Suitable for working pressure up to 325 lbs. Bronze fitted, all iron or all bronze. For direct connection to motor, steam turbine and gasoline engine or with pulley for belt drive. See Bulletin 129.





Approved Centrifugal Fire Pumps Single and Multi-Stage

Single-stage pumps for 750, 1000 and 1500 g.p.m., 100 pounds total head. Multi-stage pumps for 500, 750, 1000 and 1500 g.p.m., total heads up to 150 pounds. 2 to 6 fire streams. Complete Underwriters fittings. For discharging direct into hose lines or use with automatic sprinkler systems. For direct connection to motor or gasoline engine. See Bulletin 118.



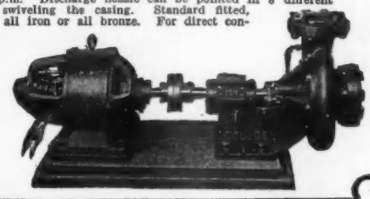
Triplex Plunger Pumps

For 150 lbs. working pressure. Displacements range from 2 to 350 g.p.m. Sizes from 1¼-in.x2-in. to 8-in.x10-in. Standard fitted, bronze fitted, or all iron. Furnished for gear connection to electric motor, or with pulleys for belt drive.

See Bulletin 101.

Single-Stage, Single Suction Centrifugal Pumps Enclosed Impeller Type.

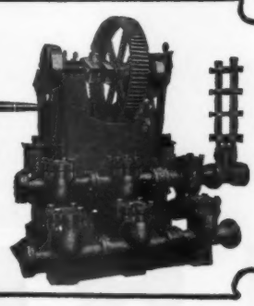
A moderately priced pump of high efficiency. Capacities 40 to 3200 g.p.m. Discharge nozzle can be pointed in 8 different positions by swiveling the casing. Standard fitted, bronze fitted, all iron or all bronze. For direct connection to electric motor or with pulley for belt drive. See Bulletin 119.

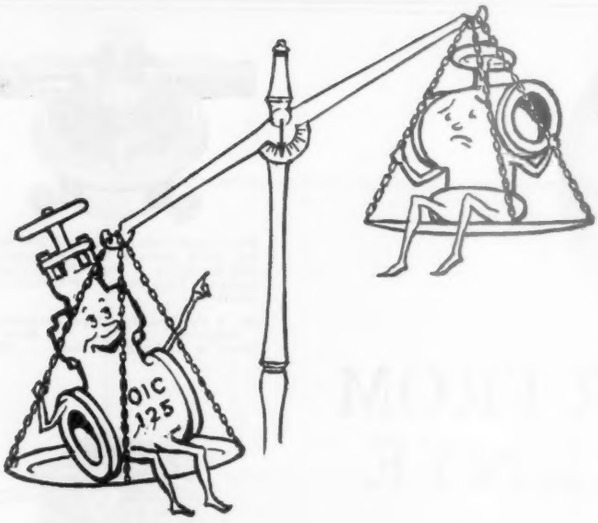


Single-Acting Triplex Plunger Pumps—High Pressure Type

A complete line of high-pressure pumps for a wide variety of conditions. Working pressures range from 100 to 1500 pounds, and displacements from 50 to 1150 g.p.m. Furnished for gear connection to electric motor or with pulley for belt drive.

See Bulletin 103.





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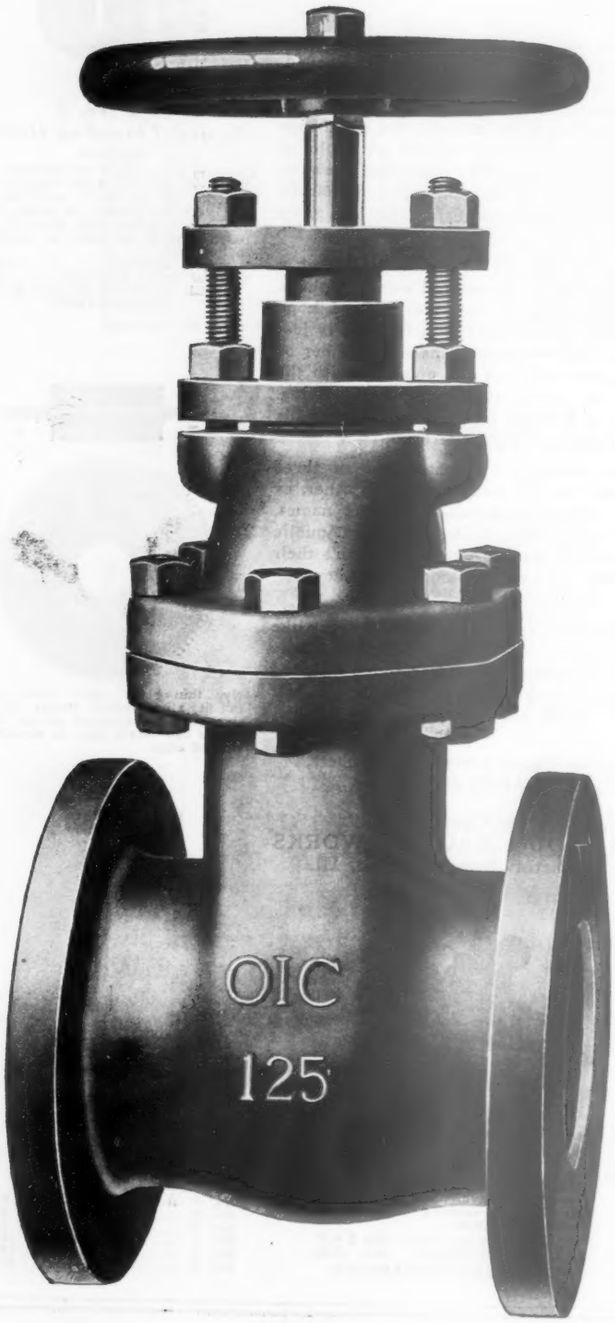

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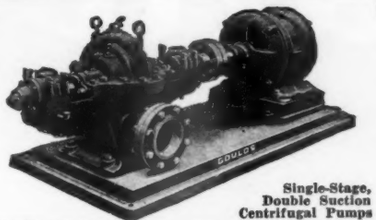
WADSWORTH, OHIO

O. I. C. Valves are Carried in Stock and Distributed in the Mid-Continental Field by International Supply Company, Tulsa, Oklahoma and Branches

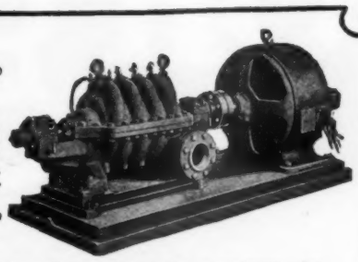


Single-Stage, Double Suction Centrifugal Pumps

Capacities 50 to 4400 g.p.m. For 100 lbs. average max. working pressure. Standard fitted; bronze fitted; all iron, or all bronze. For direct connection to motor, steam turbine and gasoline engine, or with pulley for belt drive. See Bulletin 125.

Multi-Stage Centrifugal Pumps

A new pump of volute construction with exceptionally high efficiencies. In 3 in. to 8 in. sizes, and 2 to 6 stages Capacities 60 to 2000 g.p.m. Suitable for working pressure up to 325 lbs. Bronze fitted, all iron or all bronze. For direct connection to motor, steam turbine and gasoline engine or with pulley for belt drive. See Bulletin 139.



GOULDS PUMPS for

every Pumping Condition in the Oil Industry

There is a standard type and size Goulds Centrifugal or Reciprocating Pump for almost every oil pumping condition: gathering, station, refinery and Pumps for all process work.

Unnecessary types and sizes are eliminated. This means a greater capacity to serve you with pumps built in volume and carried in stock. Improved design affords efficient, economical operation. Modern manufacturing facilities insure quick shipment and prompt service.

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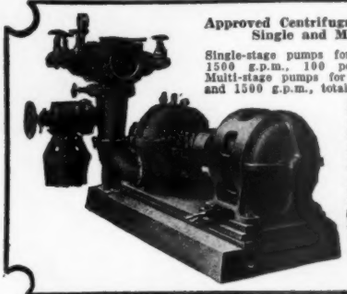
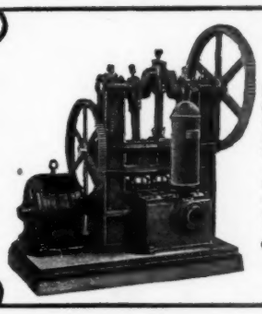
Seneca Falls New York

Approved Centrifugal Fire Pumps Single and Multi-Stage

Single-stage pumps for 750, 1000 and 1500 g.p.m., 100 pounds total head. Multi-stage pumps for 500, 750, 1000 and 1500 g.p.m., total heads up to 150 pounds. 2 to 6 fire streams. Complete Underwriters fittings. For discharging direct into hose lines or use with automatic sprinkler systems. For direct connection to motor or gasoline engine. See Bulletin 118.





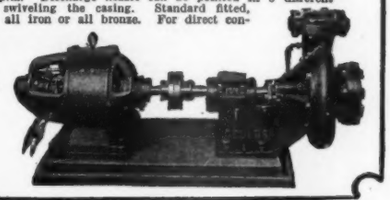
Triplex Plunger Pumps

For 150 lbs. working pressure. Displacements range from 2 to 350 g.p.m. Sizes from 1¼-in.x2-in. to 8-in.x10-in. Standard fitted, bronze fitted, or all iron. Furnished for gear connection to electric motor, or with pulleys for belt drive.

See Bulletin 101.

Single-Stage, Single Suction Centrifugal Pumps Enclosed Impeller Type.

A moderately priced pump of high efficiency. Capacities 40 to 3200 g.p.m. Discharge nozzle can be pointed in 8 different positions by swiveling the casing. Standard fitted, bronze fitted, all iron or all bronze. For direct connection to electric motor or with pulley for belt drive. See Bulletin 119.



Single-Acting Triplex Plunger Pumps—High Pressure Type

A complete line of high-pressure pumps for a wide variety of conditions. Working pressures range from 100 to 1500 pounds, and displacements from 50 to 1150 g.p.m. Furnished for gear connection to electric motor or with pulley for belt drive.

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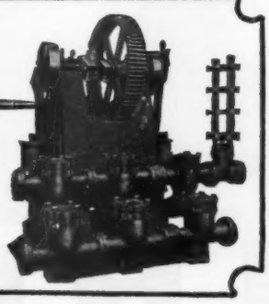

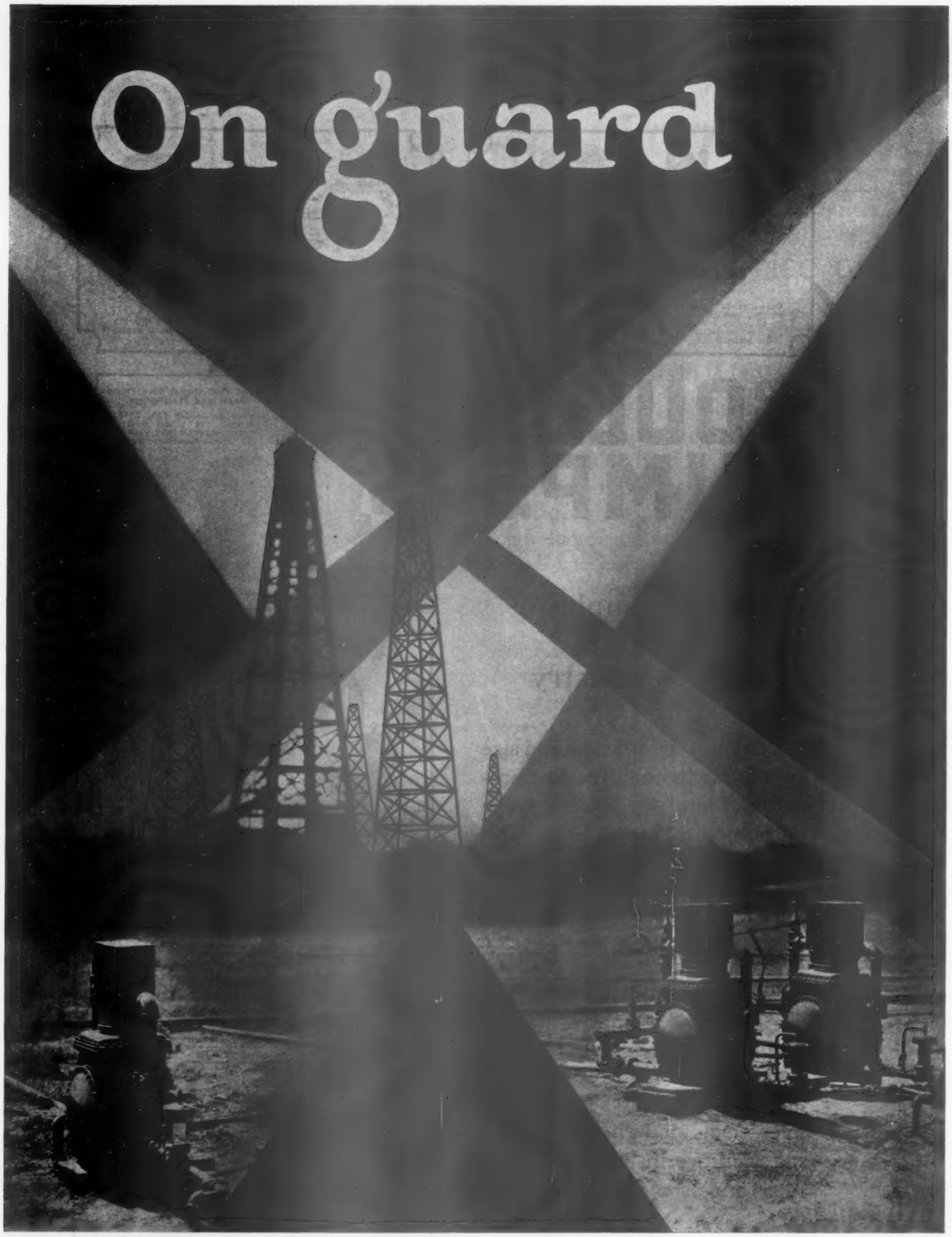

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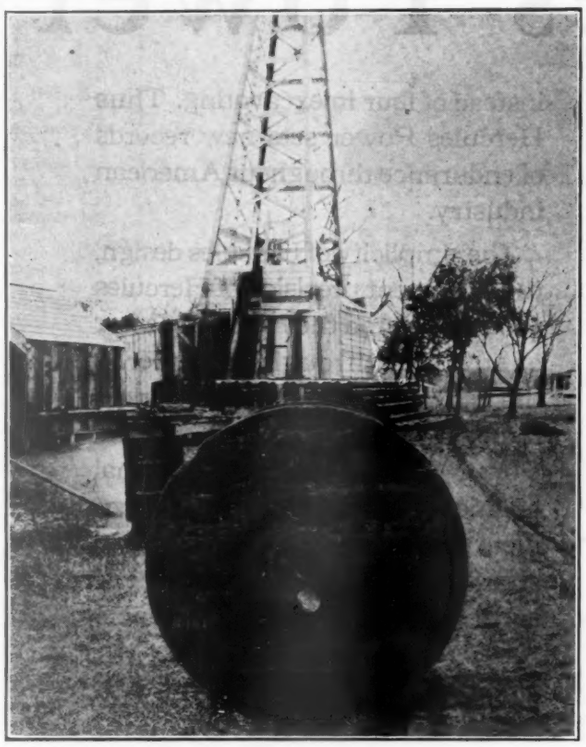

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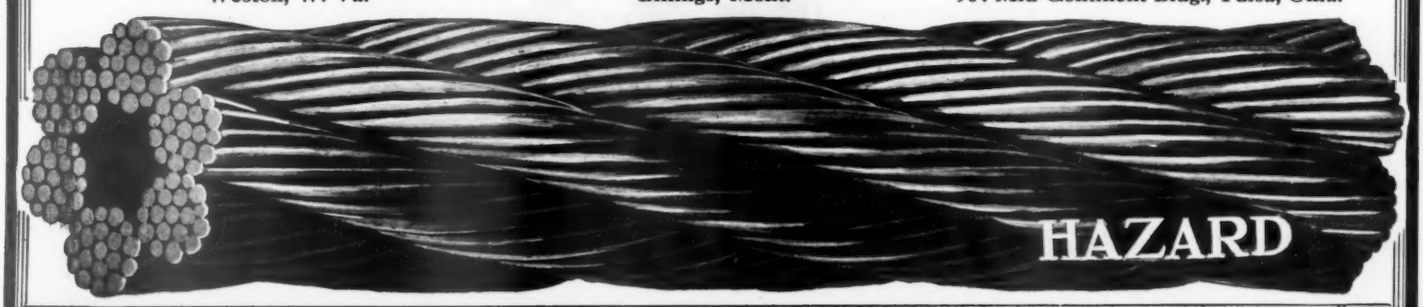

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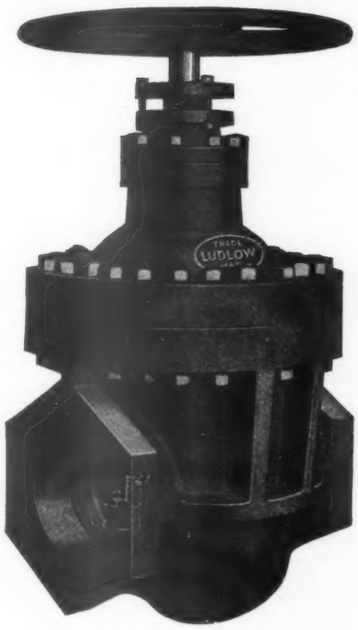
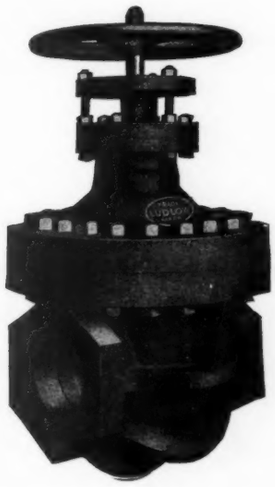


"WORTH THEIR WEIGHT IN GOLD"



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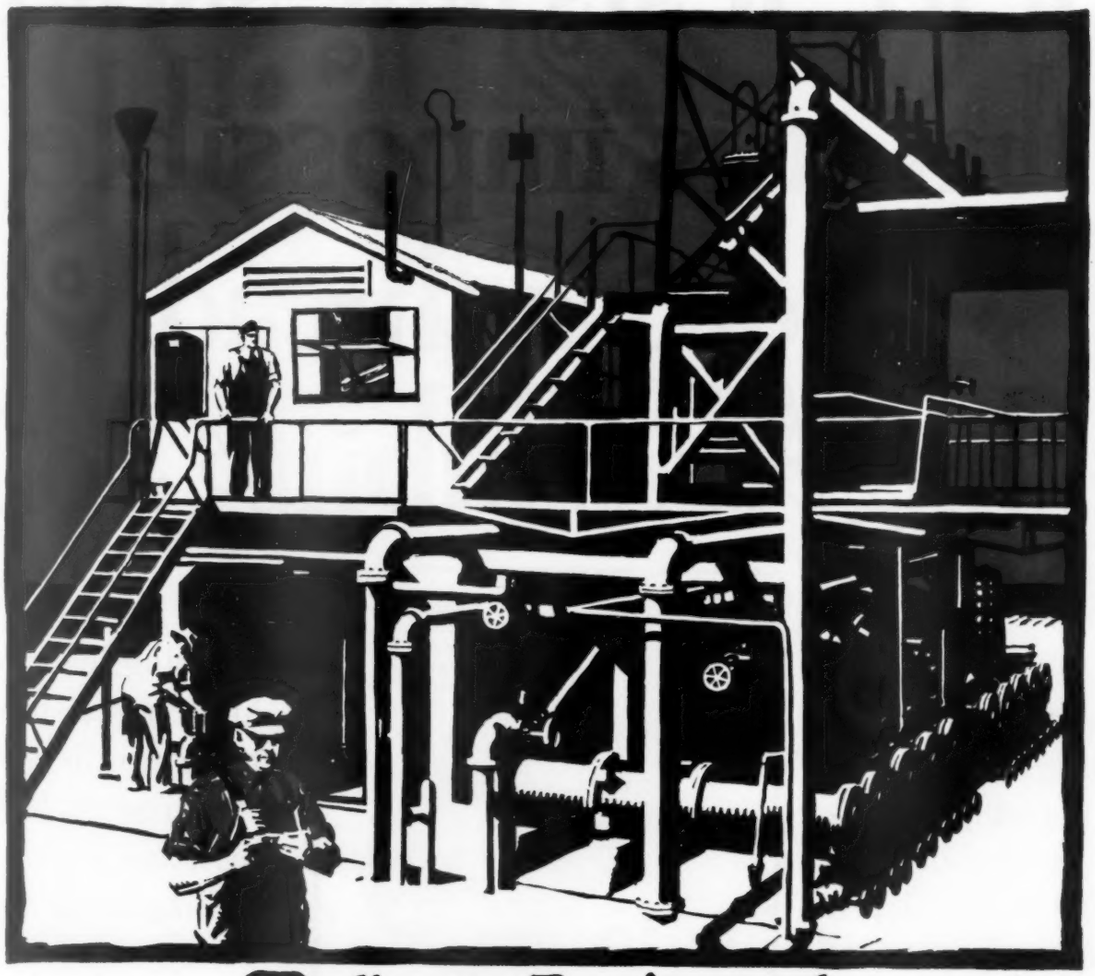

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Reading A. P. I. Tubing, according to field men in California, Oklahoma and Texas, screws together perfectly, and saves labor, due to no crossed threads, ease in stabbing, leakproof joints, and enables long strings to be run in record time. Reading A. P. I. Tubing minimizes number of pulling jobs.

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C
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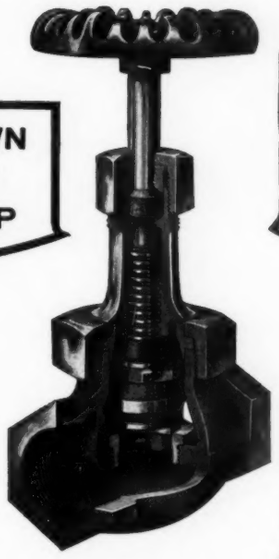

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Being hammered to shape and machined to perfection, this new drilling valve has an extremely high factor of safety without additional weight. You're assured of complete freedom from piping, sand holes or porous spots which might give way under pressure to start a havoc of wasted oil and gas.

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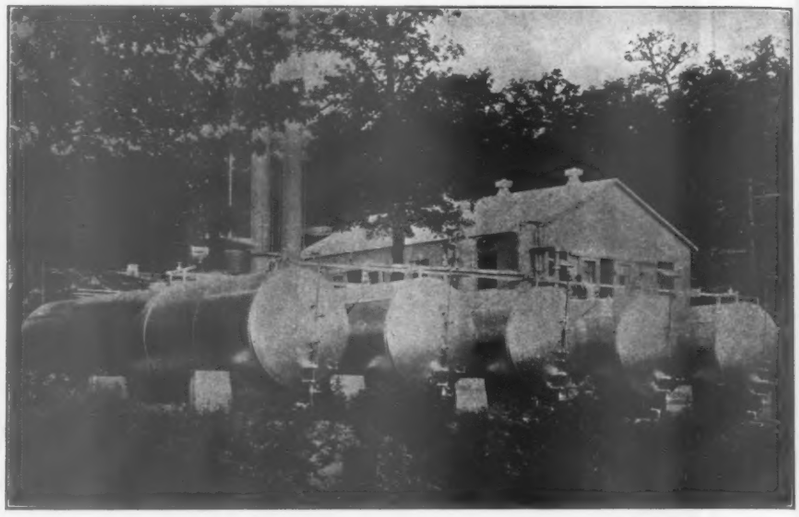
FORGED STEEL GATE VALVES



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Aluminum paints largely immune

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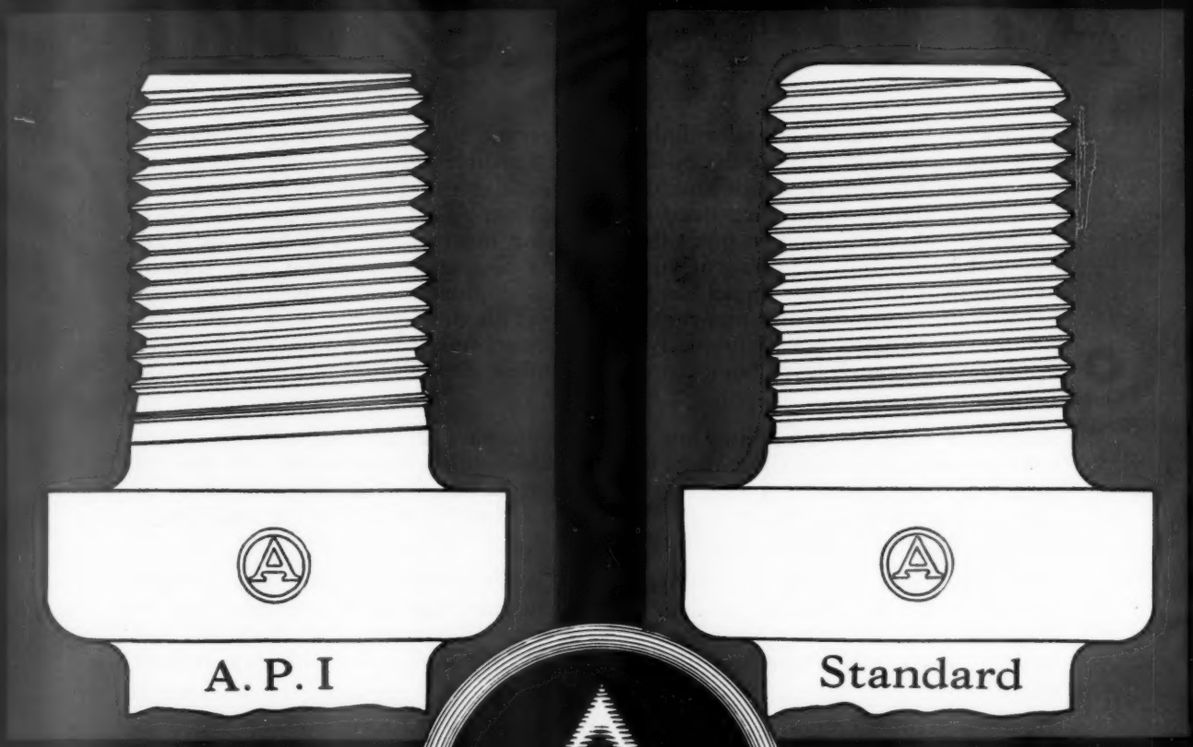

because

this mark is on them

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AXELSON SUCKER RODS

At One Reading

Oil finding, production and refining has become a science. The men engaged in it are finding that their every-day activities are calling for technical information that was never dreamed of in the old days. Problems are constantly arising about which they need expert advice. This is as true in the fields as in the refineries, and to meet that need for information The Oil and Gas Journal has begun the publication of a New Department which will submit all inquiries about field practices to leading engineers and authorities and publish the questions and answers weekly. This department will serve the production branch as satisfactorily as the department of technical questions in the refining branch have been covered by other departments of The Oil and Gas Journal.

The New Department is another effort on the part of The Oil and Gas Journal to embrace within the covers of one publication every phase of the oil industry's activities so that an oil man in any branch of the business may at one reading visualize the entire scope of the industry and find in each issue exactly what he wants to know.

This is possible only because The Oil and Gas Journal maintains in every field and oil center its own independent correspondents, regularly employed on its staff and permanently located in their areas for the purpose of studying and keeping constantly abreast of the newest developments in the industry in their localities.

By arrangements recently completed The Oil and Gas Journal has enlarged its staff so that it now has representatives not only in every section of the United States but throughout the world, taking in every phase of the oil business everywhere.

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Automatic Lubrication!

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Long-life, trouble-free, service and low maintenance cost are the natural results.

There is a Gardner self-lubricating pump for every requirement.

Send for Bulletin EP-3.

GARDNER-DENVER COMPANY

Headquarters at

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D+B SIMPLEX INSERT PUMP

This new D+B Pump adds to the famous D+B line a perfect *insert* pump which possesses all the desirable features of the "pull-out" type of pump plus the usual D+B *highest* standard of materials and construction.

The **SIMPLEX** goes in and out of the well on the rods, eliminates tubing jobs, and minimizes shock and strain on the rods. It is particularly adapted to deep well pumping, and, because the oil is kept in motion, sand has no opportunity to settle. Its design eliminates "gas locks" and renders churning of the oil impossible, greatly reducing emulsification. Reduces costs. Brings up production. Investigate.

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The Oil and Gas Journal

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Price Factor in West Texas Situation

Highest daily average estimated production in 1926, week ended Dec. 25, 2,385,139 bbls. Lowest in 1926, January 30, 1,915,960 bbls.

Higher Gravity Crudes in Greater Demand But Lower Prices for Low Gravities Would Result in More Cracking

By Andrew M. Rowley

Highest daily average estimated light oil production in 1926, week ended Dec. 25, 1,797,349 bbls. Lowest in 1926, Jan. 30, 1,371,600 bbls.

While operators in a number of areas are beginning to figure where they will procure their future requirements of light oil or that grade of crude containing a high gasoline content, there are certain economic factors relating to the West Texas situation which may change conditions as viewed in some quarters. There is a feeling that when the Seminole area begins a rapid decline in production, which is expected when the era of shooting wells is over, a price readjustment may be made in which higher gravity crudes will benefit even though lower gravities may suffer somewhat in the new price schedule. While this may come to pass, prices paid for West Texas crude will have an important bearing upon the general situation and the demand for higher gravity crudes such as Seminole.

Through a combination of skimming and cracking, it is estimated West Texas crude will yield 50 per cent gasoline and there will remain a commercial quality of fuel oil. Such manufacturing is more costly than skimming or cracking Seminole or a similar type crude, hence the feeling higher gravity crudes will get an increase in price. But, if the price of lower gravity crudes reaches a point where the difference in cost as compared to prices of high gravity crudes is such as to make cracking profitable, these crudes will be cracked for gasoline and not made into fuel oil. Such a condition, naturally, would lessen greatly the demand for high gravity oil.

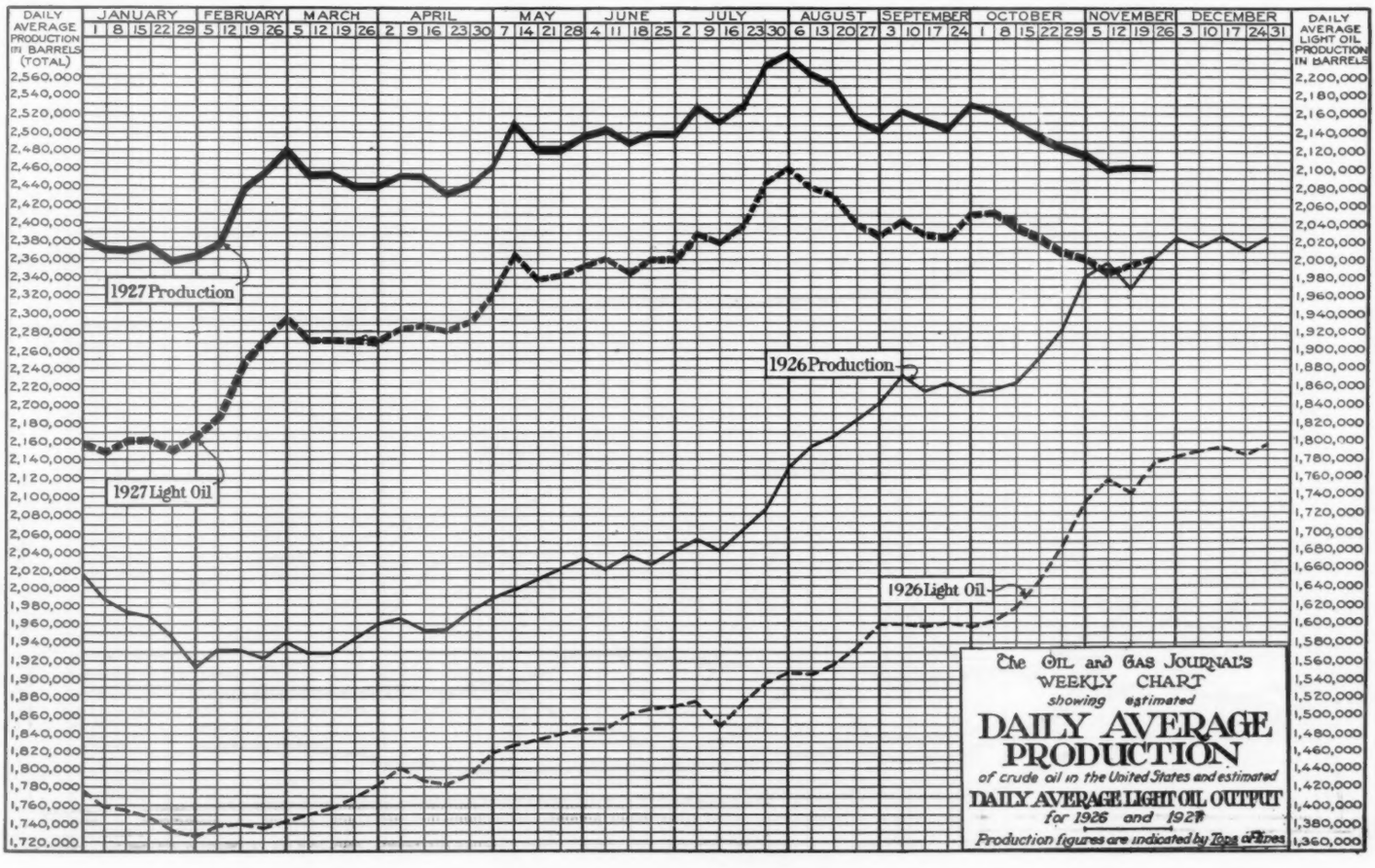
Another factor deserving of consideration. It is believed West Texas crudes are especially good for the manufacture of antiknock gasolines. These gasolines often command a higher price than the usual refinery product and this difference in price may be sufficient to warrant use of West Texas crudes for this purpose. Such a condition, too, would tend to lessen the demand for higher gravity crudes.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity oil in the United States for week ended November 19, and a comparison with the previous week follows:

	Nov. 19		Nov. 12	
	Light	Heavy	Light	Heavy
Oklahoma—				
Tonkawa	16,530	.....	16,735	.....
Burbank	38,755	.....	39,285	.....
Other Osage Fields	30,420	.....	30,470	.....
Cushing and Shamrock	21,285	.....	21,220	.....
Bristow and Eastern Bristow	24,930	.....	24,935	.....
Cromwell	11,105	.....	11,180	.....
Garber	9,930	.....	10,165	.....
Blackwell-Braman	8,635	.....	8,770	.....
Seminole	422,565	.....	422,410	.....
Wewoka	11,295	.....	12,165	.....
Northern Miscellaneous	111,795	.....	110,415	.....
Southern Fields	61,050	.....	61,445	.....
Total Oklahoma	768,295	.....	769,195	.....
North Louisiana	40,415	9,155	40,935	9,115
Arkansas	23,658	73,785	23,790	75,345
North Central Texas	142,195	.....	141,110	.....
West Texas	216,918	.....	209,832	.....
Texas Panhandle	81,925	.....	83,680	.....
East Central Texas	29,076	.....	29,577	.....
Kansas	105,905	.....	107,810	.....
Total Mid-Continent Area	1,408,387	82,940	1,405,929	84,460
Gulf Coast	.....	137,322	.....	139,543
Southwest Texas	.....	28,557	.....	28,595
Eastern	114,000	.....	114,000	.....
Rocky Mountain Area	74,977	.....	73,833	.....
California—				
Santa Fe Springs	39,000	.....	39,000	.....
Long Beach	105,000	.....	103,000	.....
Torrance	3,000	17,000	3,000	17,000
Huntington Beach	59,500	.....	59,500	.....
Dominguez	14,750	.....	14,750	.....
Rosecrans	8,000	.....	7,500	.....
Inglewood	20,000	12,000	20,000	12,000
Ventura Avenue	52,000	.....	52,500	.....
Seal Beach	49,000	.....	50,000	.....
Remainder of State	54,000	185,000	55,000	186,000
Total California	404,250	214,000	404,250	215,000
Total United States	2,001,614	462,819	1,998,012	467,598
Grand Total	2,464,433		2,465,610	

→ **Total Decrease, 1,177 Bbls.; Light Oil Increase, 3,602 Bbls.** ←



Natural Gasoline Quotations Lower

All Grades Except "A" Reduced in Price. No Export Demand for Refinery Gasolines. Fuel Oils Weak

By W. T. Ziegenhain

A decidedly weaker natural gasoline market and a soft fuel oil market were about the only changes in the Oklahoma refined oil market over the week. The volume of shipments were maintained at a fair rate but there was plenty of all products available in all sections.

The good movement of refinery gasoline tended to force gasoline prices slightly higher at times making the outlook for the balance of the year a little more optimistic, but these short periods were but repetitions of what has been going on since the middle of August and the general price ranges established then still hold. There was but little export buying to support the domestic demand this week, although the benefits from last week's sales carried over. In fact, the greatest weakness in the gasoline market was in the U. S. Motor grade, but the same price held. There is an increasing amount of special antiknock gasolines being sold at prices above the regular grades and this is giving the refiners a slightly better average price on the monthly sales than the published prices on the regular grades.

Although the support of the export purchases made last week could be seen in the refinery gasoline market the same was not true with respect to the natural gasoline. Prices on all grades below A grade were lower and there was not enough buying on the part of refiners to support the market at these lower prices. Increased production as a result of the increased facilities and cooler weather have forced manufacturers to give added concessions in order to keep the material moving.

REFINED MARKET BAROMETER

In general, refined oil prices continued for another week unchanged. Fuel oils were weaker in the Mid-Continent and along the Atlantic Coast as a result of the increased production from West Texas crudes and the lowering of the heavy crude oil prices in the Smackover Field. Gasoline shipments were maintained at a fair rate, with most of the trading being done in the lower endpoint grades. Natural gasoline was weak in the Mid-Continent, as the added production resulting from the cooler weather and increased facilities could not be absorbed by the domestic market. There were but few shipments of this material for export. Lubricants remained unchanged east of California with added weakness in the California market. Bright stock prices were shaded somewhat in an effort to maintain volume. Petrolatum was decidedly stronger on the Atlantic Coast, as great volumes of the material were taken for export.

Mid-Continent—But few price changes occurred in the general market, although added weakness developed in fuel oils. The lower endpoint gasolines moved at a fair rate, but this market was supported only by the domestic purchases. Natural gasolines were decidedly weaker, particularly the cheaper grades. The balance of the market remained unchanged.

Atlantic Seaboard—Gasoline improved as less distress material was being offered from the Gulf and California. The retail market is also improved and a better feeling regarding the future is apparent. This optimism is not shared in the fuel market, however, and bunker fuel continues weak as larger volumes of West Texas crudes are received for refining there. In spite of the weak bunker fuel market, the Diesel oil prices and gas oil prices remain firm. Lubricants are firm, while wax has weakened somewhat. Petrolatum, particularly the filtered grades, are very strong and the barreled snow white grade struck a new high price for the year.

Pennsylvania—The general market was very quiet, with kerosene and bright stocks weaker.

Chicago—There was little demand for gasoline, but prices remained firm. News of inquiries being made for kerosene increased the activities in that market, but there was no change in prices. Distillates and furnace oils moved at a satisfactory rate.

California—Domestic gasoline was stronger and exports were increased, improving the general market situation. Fuel oil and kerosene moved in good quantities, but the lubricant market developed additional weakness.

Kerosenes were unchanged over the week but were plentiful, showing the export purchases made last week were not sufficient to support a higher market. Distillates moved out more rapidly and those refiners making a high gravity low-flash furnace oil say their volume of sales is very satisfactory.

Fuel oils continued very weak and with reductions made in the heavier crudes outside of Oklahoma, there is little chance of any material improvement in the heavy fuel market for several weeks at best.

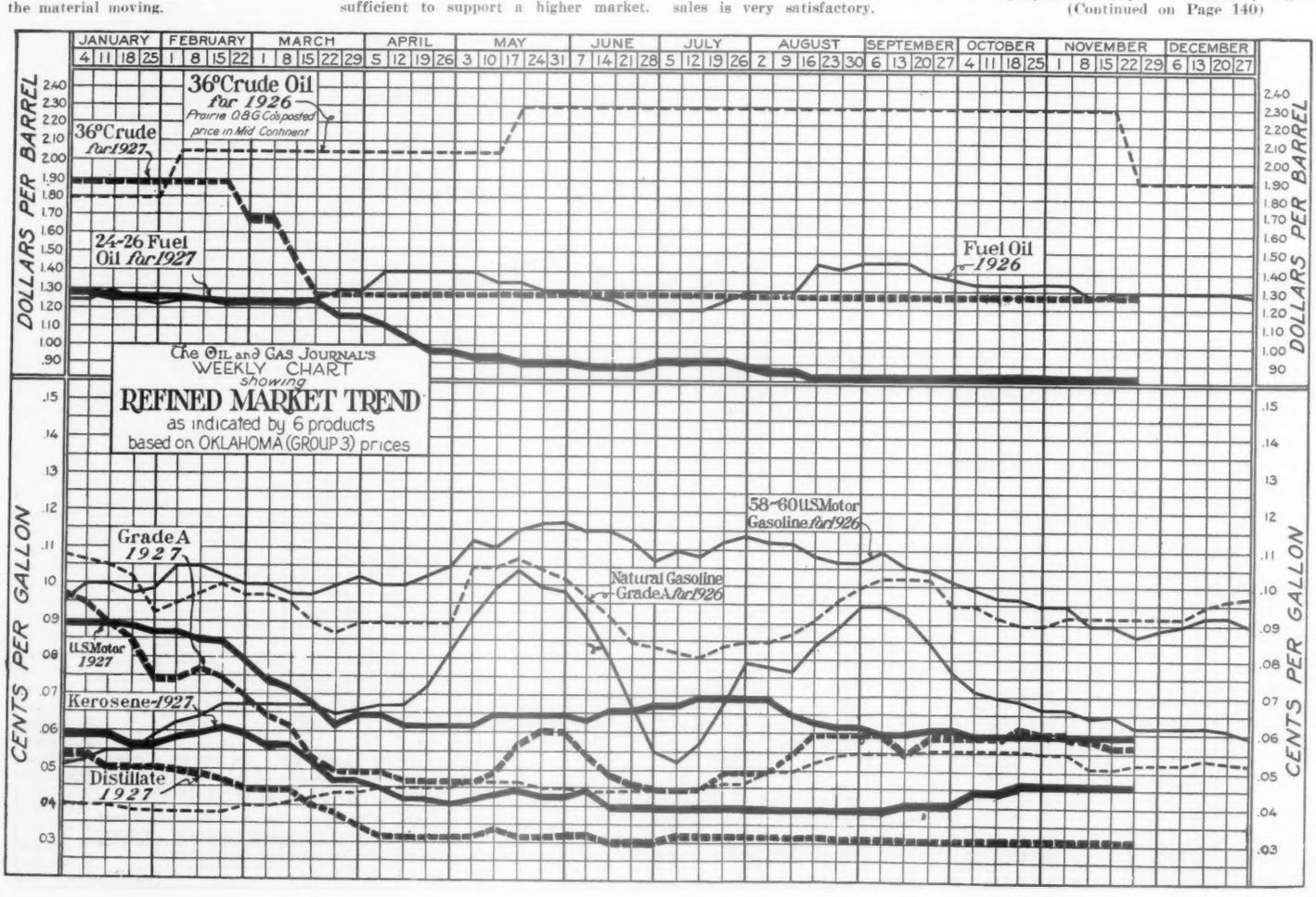
The posting of a price of 75 cents on Urania, Louisiana crude by the Louisiana Oil & Refining Co. on November 18 was followed on the following day by that same company posting lower prices on Smackover crudes. The light crude, that above 24 gravity was cut 15 cents making the new price $1 and the heavy grade was cut 5 cents making the new price 85 cents. These decreases were made in order to meet current fuel oil prices in trade territories common to all midwest refining centers and the effect on the Oklahoma market, as a result of these lower postings will be to further restrict the present marketing area.

With cheap fuel oil available in the East as a result of the large shipments of West Texas crudes to be refined in the Atlantic Coast refineries, and the oversupply of fuel in California there is little relief in sight even outside the normal Group 3 marketing territory. The fact the Mexican situation has improved has caused some to believe activities will be renewed in the field and Mexican bunker fuel will again prove to be a major factor in the fuel market.

Gas Oils Weak

Gas oils were materially weaker also, partly due to the weakness in the fuel market and partly because refiners, who had stored large volumes for cracking purposes, in hopes of materially higher

(Continued on Page 140)


JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER
DOLLARS PER BARREL
36°Crude Oil for 1926
Prairie O&G Co posted price in Mid Continent
36°Crude for 1927
24-26 Fuel Oil for 1927
Fuel Oil 1926
The Oil and Gas Journal's WEEKLY CHART showing
REFINED MARKET TREND
as indicated by 6 products based on OKLAHOMA (GROUP 3) prices
CENTS PER GALLON
58-60 U.S.Motor Gasoline for 1926
Grade A 1927
Natural Gasoline Grade A for 1926
U.S.Motor 1927
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Distillate 1927

Pecos County Production Possibilities

Big Area Already Proven and Geologists Believe Deeper Production Exists Under Present Producing Sands

By C. D. Lockwood

FORT WORTH, Tex., Nov. 19.—When the Mid-Kansas and Transcontinental's No. 2 Yates-C in the Yates Pool of Pecos County was opened up for a production test last week and startled everybody by filling all available storage (to the extent of 2,059 bbls.) in the remarkable time of 45 minutes, it created a merry little dispute among writers in the daily press and even evoked some argumentative comment from production men in the field.

The big question under consideration was whether or not this well, acknowledged to be of phenomenal caliber, could actually produce 65,400 bbls. in 24 hours if allowed to flow steadily for an entire day.

It is admitted by the best authorities that few wells of enormous initial flow maintain their early rate of production for any extended period of time. Numerous instances could be mentioned, however, in which they have done so. All of this haggling over what No. 2-C might do is really one of those well-known tempests in a teapot because in the final analysis the question resolves itself down to a matter of personal opinions. The Mid-Kansas and Transcontinental production men in the field, who watched the well's performance after working with it for several days, believe that if allowed to flow open for 24 hours No. 2-C would fill 65,000 bbls. of tankage. The well is close to the water line on the eastern edge of the field, however, and the chances are slight that anybody will ever know what this extraordinary producer could actually do.

Unusual Condition

No. 2-C gave early indications that some unusual condition existed in that locality. At a depth of 560-70 feet it made 132 bbls. in 12 hours. Others wells in the field have had showings of oil at this level but none made anything like that much oil. The regular pay was topped at 955 feet and drilling was stopped at 993 feet, at which point the company production men estimated the test good for 800 bbls. an hour before shutting it in. The gauge which started everybody talking about this well was taken without further drilling and was for the semimonthly proration schedule by which the allowable pipe line runs of all companies in the field are computed.

Important Extension

Of considerably greater importance than the estimated production of this big well is a further extension to the northwest which was effected this week by the Gulf Production Co. More than 5 miles northwest of Mid-Kansas and Transcontinental's No. 2 Yates-C, the Gulf's No. 3 Yates, located on the Runnels County School Land, flowed 60 bbls. an hour at 1,369 feet. This well is 4,000 feet northwest of Roxana Petroleum Corp.'s No. 2 Tippett, the nearest producer, and is 6,000 feet northwest of Humble Oil & Refining Co.'s No. 3 Smith, near the center of the north line of Section 36, Block 194, which was just being drilled into the pay when the proration gauges were taken. The latter well flowed 333 bbls. an hour while drilling at 1,438 feet in pay topped at 1,365 feet.

The entire 5 miles of hills and canyons intervening between the Gulf Production Co.'s No. 3 Yates and the Mid-Kansas-Transcontinental's No. 2 Yates -C is covered with wells making more than 100 bbls. an hour on the one-hour test. In fact, only 15 out of a total of 56 wells included in the November 15 proration schedule failed to make at least 100 bbls. an hour. Thirteen flowed more than 500 bbls. each during their allotted 60 minutes and five of these were good for more than 1,000 bbls. during the hour.

At this time nobody can state with any assurance just what these wells might do if allowed to flow open for a time. The logical deduction is that the water level would start rising up the flanks of the structure and soon drown out the production, at least in those wells which are low structurally. Just a few months ago, however, when the early tests were giving indications of being good for 100 bbls. and 200 bbls. an hour, predictions were freely made that they would never hold up to that rate for more than a day or two. Since then, some of these have exhibited tendencies to increase rather than decrease on the only occasions when they were opened for as much as a day.

It is enough to say that (and as much as can be said at this time) that a vast quantity of oil will be produced from the Yates Pool.

Big Productive Acreage

Subsurface contouring on top of the McCamey lime indicates a producing area that will probably include at least 10,000 acres and may embrace 14,000 or 15,000 acres when the story is finally told. Already there are some bulges on the edges of the field and the limits to which these will extend can only be guessed. In Section 62, the "D" lease of Mid-Kansas and Transcontinental, there is an edge well which gauged 208 bbls. when the proration hourly test was taken October 31, and flowed 537 bbls. in its hour last week, having been deepened in the interim.

The Gulf Production Co.'s No. 3 Yates ran a little low to the northwest but this may be due to its location in a saddle and tests farther to the northwest may run higher. Nearly 4 miles almost due west of the Gulf's extension well, Douglas Oil Co. and Roxana's No. 1 White & Baker, in the SW cor. NE, Section 6, had only 100 feet of salt and topped the lime higher structurally than many estimated. This is regarded as an indication that the Yates Pool will extend much farther to the west than was anticipated.

May Be Deeper Zone

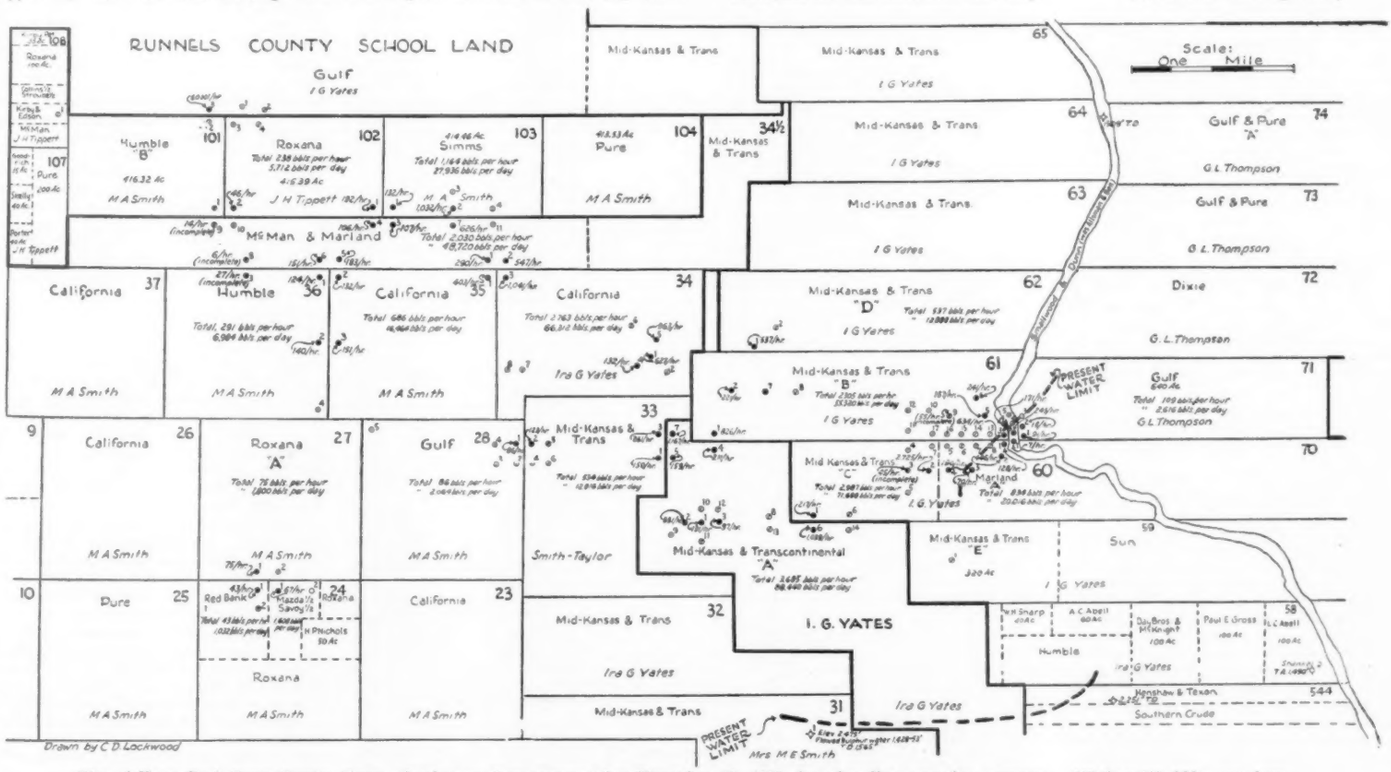
Geologists are still convinced that deeper production will be found on the Yates structure after the present producing horizon has been exploited. Their reasoning is based on oil showings and sulphur water at various levels in deep wells surrounding the field. This subject, however, can be tabled for a while, since there will likely be little effort to discover deeper production unless somebody gets a dry hole in the heart of the pool. This, by the way, is something which has not been done yet, and in that respect the Yates Pool differs from nearly all other West Texas fields, especially the Upton County trend and the Hendricks Pool of Winkler County. The Church-Fields-McElroy Pool has no dusters in its midst but does have some very light producers offsetting big wells.

The Yates Pool is, in many ways, more similar to the Big Lake Field than any other producing area that has been found in West Texas so far. In steepness of structure, the Yates is more like Big Lake than any other. Some two years or more ago, when the oil industry was still skeptical of the potentialities of Big Lake, water was discovered in several of the wells there. Since that time it has been found that practically the only water trouble is encountered below the minus 300 contour on the flanks of the structure and that the sulphur water has shown little tendency to encroach on the field. Such water as they have in the wells is treated out with little trouble.

This may be true of the Yates Pool if the wells are kept under control and the oil is produced slowly. The water scare which went out a month or so ago has diminished rather than increased, although it can truthfully be said that the water has had little chance to come in because the wells have been choked heavily.

In regard to ultimate recovery of the Yates Pool, you can safely multiply about 10,000 acres by whatever per acre re-

(Continued on Page 127)



Map of Yates Pool, Pecos County, Texas, showing one hour gauges taken November 15, 1927, for pipe line proration purposes. 132/hr.—132 bbls. per hour.

Varied Production Methods at Garber

Wells Produced by Air Lift, Swab and Pump. Salt Water Handled in a Novel Manner

By J. L. Dwyer

Modern equipment and methods are making possible in the Garber Field, the production of wells which under antiquated methods would have been abandoned and plugged. The air-gas lift, with its engines, compressors and miscellaneous apparatus, and the oil and gas separator, play an important part in handling the output of wells which make an abnormally large amount of water daily with the oil. The effect of the air-gas lift system has developed some interesting observations upon the Layton sand wells on one lease in this area.

Although the Garber Field of Garfield County, Oklahoma, has passed from the limelight, it still presents several interesting phases of oil production. This remarkable operation with its multiplicity of sands ranging in depth from 1,400 to 4,200 feet still produces a very respectable quantity of oil by many methods.

The scene of drilling since 1917, the Garber Field has witnessed more changes than any other area in the Mid-Continent territory. Running the entire gamut of producing and drilling equipment from the old style pumping jacks to the modern air lift equipment, Garber has had a varied experience in producing matters.

The Sinclair Oil & Gas Co.'s N. Walker lease, in Section 13-22-4w, has 21 Layton sand wells scattered over its 160 acres as shown on the accompanying map. These wells have been produced by the air lift, by the swab, and by the pump. The sand condition has naturally varied in different parts of the lease, and may to some extent be responsible for the variation in output. It is significant however, that in the case of the wells which have been flowed by the air lift, a very small amount of water has been produced, in some cases, none at all.

Eliminating Water

The accompanying map shows the position of the wells, and the outlines mark groups of wells which have been subjected to similar methods of production. The best performance in eliminating water is seen in the three wells comprising the farthest east group, Nos. 29, 68 and 57. These wells have yielded good oil production, and none of them has produced a barrel of water, although structurally two of them are believed to be rather low.

The surface of the North Walker farm is very flat, with an elevation which is comparatively constant in all parts of the lease. Wells No. 57 and 68 found the top of the Layton sand at 3,677 and 3,794 feet respectively. No. 29, found the top of this sand rather high, at 3,590 feet. The last well encountered the thickest body of sand, for it drilled 88 feet of Layton. These wells all were placed upon the air-gas lift soon after completion.

The center group of wells presents another instance of good work done by the air lift. Out of six wells, five have produced no water, while the sixth has made a total of 120 bbls. to date. The water in this well cannot be traced to low structural conditions, for the top of the sand was 3,666 feet while two other wells of this group found the top of the sand at this depth and deeper, and still have made no water. The bottom of the hole in this well is 3,696 feet, and the bottom of the holes in Nos. 66 and 64 are deeper than this, and yet they have made no water.

The two wells comprising the southeast group on this lease were originally swabbed, and one of them has never made any water. They are both producing on air-gas lift at present.

The large group of wells on the west side of the lease has made the majority of water which has been found on this lease. This group consists of seven wells, all of which have produced by means of the pump and the swab. Two of them were very light wells which have practically been abandoned. The top of the sand in them varies from 3,580 feet which is the sand record for No. 36; to 3,703 feet, which is where No. 72 found the top. No. 36 is the highest well in the field and yet it made the second largest amount of water of any well in this group. It was drilled 100 feet into the sand. Well No. 60 which found the top of the Layton at 3,649 feet, has made the most water of any well in the group, (18,308 bbls.) and yet the bottom of the hole in this well was only 3,660 feet, and the well only drilled 11 feet of sand.

Facts Established

After considering these facts we have established that: (1) The top of the sand has no bearing upon the amount of water produced; (2) the total depth of the well is not directly responsible for the amount of water produced, for No 72 which has a total depth of 3,707 feet has made only 380 bbls. of water.

The extreme west group of wells has a depth which is below the average on the lease, and yet they have been free from water trouble, neither well having made any water since completion, although both of them have total depths below 3,700 feet.

It will be observed that the wells which have flowed by the air-gas lift have been uniformly free from water, and while this statement is not intended as indicating that the air-gas lift will prevent the intrusion of salt water, a certain relation between the use of this system of producing, and freedom from water troubles will be noted.

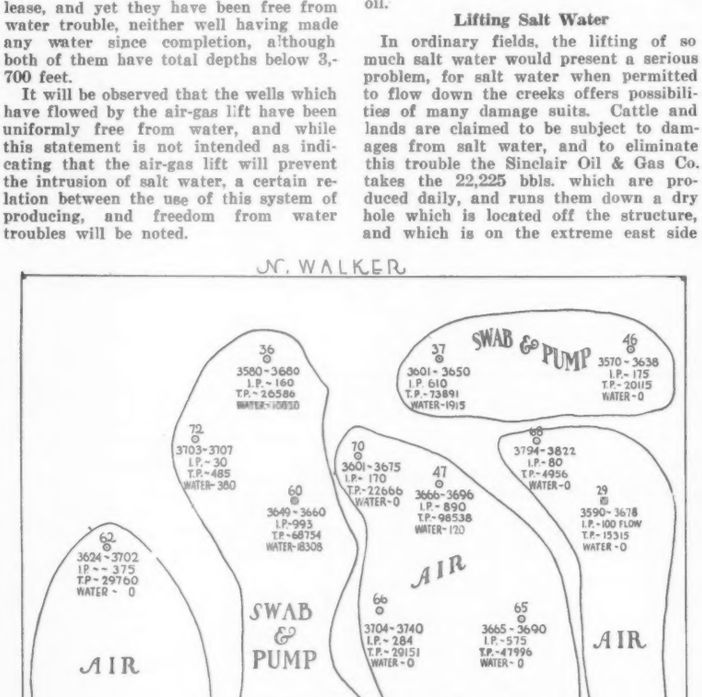
The figures of oil production shown on the map were made when the wells had an average age of 13 months.

The siliceous lime wells in the Garber Field present the most recent exploration. The pay in this horizon was tapped at 4,400 feet by the Sinclair Oil & Gas Co.'s No. 25 Belveal, which opened this stratum at Garber. The siliceous lime production attained a peak output of some 68,000 bbls. during the fall of 1925. One single well in this sand at Garber had an initial production of 26,000 bbls. daily. The oil from this horizon was accompanied by a heavy volume of salt water almost from the start. The high temperature of this salt water sounded the first note of warning. Its presence was overemphasized in the beginning, and it was thought the temperature meant that the end would soon be in sight. The siliceous wells have been producing steadily since 1925, and seem to be bothered very slightly by the water.

To obtain this production, a terrific volume of water must be handled, and in the siliceous wells, it is believed the air-gas lift offers the only method by which they could be produced economically. The Sinclair Oil & Gas Co. has 14 siliceous lime wells which make 2,257 bb'ls. of oil daily. They also make 22,225 bbls. of salt water daily which is lifted by the air-gas lift along with the oil.

Lifting Salt Water

In ordinary fields, the lifting of so much salt water would present a serious problem, for salt water when permitted to flow down the creeks offers possibilities of many damage suits. Cattle and lands are claimed to be subject to damages from salt water, and to eliminate this trouble the Sinclair Oil & Gas Co. takes the 22,225 bbls. which are produced daily, and runs them down a dry hole which is located off the structure, and which is on the extreme east side of the field. The dry hole into which the salt water is introduced is cut off from the producing body of sand.



The Sinclair Oil & Gas Co.'s North Walker lease in the Garber Field; showing the grouping of wells, and their method of producing oil. The letters I.P. indicate the initial production; T.P. the total oil production; and water shows the total amount of water produced by the wells.

This process constitutes a novel method of salt water disposal, and would not have been possible under the old time manner of oil production. The air-gas lift handles the large volume of fluid; the oil and gas separators detaching the two kinds of fluid with no difficulty. These are modern developments in the technology of petroleum production, and mark another notch in industrial progress.

The amount of salt water which some of the siliceous lime wells make is astonishing. The Sinclair Oil & Gas Co.'s No. 27 Hartley is believed to top the list. It produces 396 bbls. of oil daily, and 9,000 bbls. of salt water. The bulk of the salt water from the Sinclair company's siliceous lime wells comes from seven wells. Their daily oil and water production is given below:

Well—	Oil	Water
20 Hartley	140	3,900
27 Hartley	396	9,000
24 Walker	80	1,100
28 Walker	38	1,100
30 Walker	70	2,250
58 Walker	65	700
21 Kisner	120	915

Corrosion Problem

A peculiar feature of the salt water problems of the siliceous lime wells in this field, is that they corrode the lead lines and all other outside equipment, but never affect the tubing or the casing. This is unusual, but the life of lead lines, and flow lines through which the salt water is put, is very short. The average temperature of the salt water is 130 degrees Fahrenheit.

The siliceous lime wells have a high fluid level, and the majority of wells now have the tubing placed at least 2,000 feet off bottom. With an average depth of 4,350 feet, the average string of tubing is only 1,900 feet in the 14 wells of the Sinclair company. The large water wells, their tubing figures, and working pressures are listed:

Well—	Tubing feet	Working Pressure pounds
20 Hartley	2,000	380
27 Hartley	1,804	560
24 Walker	1,997	260
28 Walker	1,716	240
30 Walker	2,000	380
58 Walker	1,500	260
21 Kisner	3,197	380

The 14 siliceous lime wells, from discovery in April, 1925, until November 1, 1927, have produced 566,853 bbls. of oil which has an average gravity of 41 degrees A.P.I. Their decrease under the air-gas lift system has been very slow. During the past year the average production of the 14 wells declined only 81 bbls. per day.

After trying all methods of using the air-gas lift, the Sinclair Oil & Gas Co. in its Garber operations introduces the gas through the tubing, and the wells are flowed between the tubing and the casing.

The Garber Field has more producing sands than any single field in the Mid-Continent area. Starting at 1,400 feet where the Hotson sand, which was the discovery sand, is located, and running to a depth of 4,400 feet, where the Wilcox sand is found, a group of nine separate and distinct formations are encountered. They have made Garber famous.

Big Gas Line to St. Louis Announced

Moody-Seagraves Interests to Build 24-Inch Line With Capacity of 212,000,000 Feet From Richland Parish, La.

By D. H. Bancroft

SHREVEPORT, La., Nov. 21.—Plans for what is claimed to be the largest natural gas pipe line in the world in point of view of capacity and diameter of the pipe, have been announced here by representatives of the Moody-Seagraves interests of Houston, Tex., who will build the line from the Richland Parish gas fields in northeastern Louisiana to St. Louis. It will be 427 miles of 24-inch line using couplers and will have a maximum capacity of 212,000,000 feet per day, though only 150,000,000 feet will be handled at first. With the five 6,500-horsepower booster stations required and three major river crossings it will cost approximately $20,000,000 and will handle gas for industrial consumers in St. Louis, East St. Louis, Cape Girardeau and Poplar Bluffs, Mo., and other cities, and probably for domestic consumption in various eastern Arkansas and Missouri cites along the route. Contracts have already been signed for the total of the initial 150,000,000 feet, it was stated, and the builders have, or will have, reserves on their Richland Parish leases to meet this demand by the time the line is built, without going outside its own production.

Engineering details of the project were not available here, but it was stated that preliminary surveys, estimates, etc., have about been completed. The entire territory to be traversed, through the rich east Arkansas agricultural belt and southeastern Missouri, has been mapped from airplane and topographical contour maps also have been drawn.

Start Construction Next Year

Construction of the line will not begin for several months, at least not until after the Dixie-Gulf Gas Co.'s (Moody-Seagraves) Webster Parish Waskom-Houston 22-inch line now being laid is completed in January. It is not anticipated that bids will be sought much before the bad weather of winter and early spring is over. The general character of the country to be traversed by the line is such that few difficulties will be encountered, the route being through the flat alluvial prairie section of eastern Arkansas. There will, of course, be numerous streams to be crossed, but only three major river crossings will be required, the Arkansas, White and St. Francis. The Ouachita River is west of the Richland Parish fields. In southeastern Missouri and northeastern Arkansas it will get into the highlands of the Crowley's Ridge country and the hills of the eastern end of the Ozarks, but even here it will offer few, if any, unusual problems.

Plans for only one lateral, to Cape Girardeau, are in immediate prospect, it was stated, but there are persistent rumors of two branches of major proportions to the two largest cities near the route to be followed.

Meanwhile, representatives of the Moody-Seagraves interests are and have for some time been busy negotiating for franchises to supply fuel to the towns along the right of way which, incidentally, will not be acquired until final survey for the line is made, and special elections on franchise grants will be held in these towns during the next few months.

A rival concern planning a similar line has been reported active in getting franchises but inquiries here have failed to develop anything definite, and it was indicated in conversation with Moody-Seagraves representatives who authorized this first formal announcement, or confirmation, of their plans, that these rival interests may not be so much "rival" as newspaper inklings of the present project from St. Louis might suggest.

Organization of the Richland-St. Louis project will be like that of Moody-Seagraves' Webster Parish-Houston system, the producing, transporting and distributing phases each having its own organization under a parent company, and these will be formed while actual construction of the line is waiting delivery of material. This latter feature will largely determine when construction will begin, as it is not known at this time where orders for the necessary line and booster station material and equipment will be placed on the manufacturers' books—how much there will be ahead of them.

At present, the producing member of the Richland-St. Louis project is operating as Moody-Seagraves and has two wells with 35,000,000 feet initial open flow shut in and five more drilling, and several thousand acres of leases in the proven and semiproven area of the field. The exact amount is not available but it is sufficient, it was stated, to permit drilling of sufficient wells to more than provide the 150,000,000 feet initial production to be transported through the line when it is placed in operation. This will probably be not until some time next fall.

Moody-Seagraves and the Natural Gas & Fuel Corp. of the Cities Service group are the most active interests developing the Richland gas field, with Gulf Refining Co. looming as their nearest rival at present. The latter is not so much interested in gas production, however. Natural Gas & Fuel Corp. has one well with 57,000,000 feet initial open flow and three drilling with locations for two more. Gulf Refining Co., discoverer of the field last December, has completed four wells with 123,000,000 feet initial flow and has three under way, one of which is to be a deep test 6 miles north of production. Other operators in the field, of whom there are several, have completed eight wells with an initial open flow of 141,500,000 feet and have eight wells under way. Altogether, there have been 15 successful completions in the new field having an initial open flow of 356,500,000 feet per day. Four tests since the Gulf's discovery well have been failures and there are 19 wells drilling. Operators active in the field at present include Gulf Refining Co., Moody-Seagraves, Natural Gas & Fuel Corp., the Palmer Corp., Louisiana Petroleum Co., Texas-Louisiana Carbon Co., Ruston Drilling Co., Stovall Drilling Co., S. D. Hunter, Southern Carbon Co. and Roxana Petroleum Corp.

Other Lines Planned

Some of this gas already available is being piped out of the field by Natural Gas & Fuel Corp. to El Dorado, and Interstate Pipe Line Co. to Baton Rouge and New Orleans and Louisiana and Mississippi towns en route. The James interests of Ruston, La., and El Dorado, Ark., are reported to be planning a small line to serve Mississippi towns, and Electric Bond & Share Co., operating as Natural Gas Producing Co., is also engaged on a line to Pine Bluff. Sam Hunter of the Ouachita Natural Gas Co., Shreveport, and Ross Morgan, El Dorado, Ark., recently formed another pipe line company to build a line from Ouachita Natural Gas Co.'s production in the Monroe Field to El Dorado.

With this lineup of pipe lines, actually in operation, definitely under way, and projected, it is believed that any attempt to use Richland gas for carbon burning to the consequent rapid depletion of the field will not succeed to any great extent. Recently there was much agitation in Rayville, the parish seat, and vicinity, in favor of permits being granted carbon companies seeking entry into the field, but the Department of Conservation merely took the matter under advisement since when the attempt seems to have been abandoned.

Moody-Seagraves, Gulf Refining Co. and Natural Gas & Fuel Corp. hold the larger part of acreage in the present and prospective field, which looms as a rival to Monroe in both are and productivity, they having gone into it on a scale so large that developments in the gas industry in the six states within easy pipe line reach of Louisiana, Arkansas and East Texas gas fields beyond what has already taken place are not only hinted at but strongly indicated.

As yet it has been impossible to obtain even the slightest confirmation of rumors that have been current here for some time, but a summary of the scattered operations that are actually under way or soon will be, and others that are suspected and rumored, adds strength to suspicions of plans for a combination of interests that will link points as far away as Memphis and St. Louis, possibly beyond, with the gas fields of West Texas, north Louisiana and northwest Arkansas.

Many Interests Active

Doheny interests are busy developing the Johnson, Logan and Pope County proven and prospective gas fields in northwestern Arkansas and building a pipe line down the Arkansas River toward Little Rock. They also own production in the northeastern Louisiana gas fields and have leased a pipe line into Camden, Ark., not far from Pine Bluff, Ark.

Benedum & Trees interests have production in northwest Louisiana and a pipe line from Caddo Parish into Little Rock, with a lateral to Pine Bluff.

The Moody-Seagraves interests have a line from Houston to the Southwest Texas gas fields; are building from Houston to Webster Parish and other northwest Louisiana production, and will build from their Richland properties to St. Louis, the line passing about half way between Memphis and Little Rock.

The Insull interests own the Southwestern Gas & Electric Co., operating in Caddo Parish, and a large area in southwestern Arkansas, which is marketing both its own production and that bought from outside producers. The Insull interests are more concerned with generation and distribution of electricity, at least in this section, than they are interested in the gas business.

It is not beyond the realm of possibility, or even probability, that the rumors have at least a semblance of foundation in fact, when all the circumstances as to sources of supply, feasibility of pipe line construction, and markets to be served in Texas, Louisiana, Arkansas, southern Missouri, west Tennessee and Mississippi are taken into consideration.

The present trend in the gas business being along the same lines the railroads have been following for the past few years, the rumors and reports of negotiations for at least two of the three gas interests actively engaged in Louisiana, Arkansas and Texas getting together in a merger or one buying out the other with consequent physical connection of their pipe lines taken together would seem to support the hypothesis that the three systems built, building and proposed may be the forerunners of a gigantic gas producing, transporting and distributing combine.

PECOS GUSHERS HAVE SOMETHING TO SHOOT AT TO BREAK RECORDS

So much misinformation has been written about the initial production of notably large producing wells since the Transcontinental-Mid-Kansas' No. 2-C Yates in Pecos County came in that it may be well to clear up the situation.

In the first place there is no way of telling how large a producer the new Pecos County gusher is because it was permitted to flow only an hour. The well gauged 2,059 bbls. in 45 minutes. If it flowed at this rated for 24 hours it would be a better than a 65,000-bbl. well, but it was given no opportunity of proving whether it was a 65,000-bbl. well or a 15,000-bbl. well.

A press association sent out a story on the well in which it was compared to other big wells, including the famous Lakeview gusher in California, which, the dispatch says, started at 60,000 bbls. a day but quit on the third day.

As a matter of fact the Union Oil Co.'s No. 1 Lakeview, completed on March 15, 1910, started at 75,000 bbls. a day and produced over 9,000,000 bbls. up to four years ago. The Oil and Gas Journal of November 29, 1923, carried a story of the historic wells in American fields, written from carefully collected data submitted by its field correspondents. L. P. Stockman, our California correspondent, in his report on the Lakeview gusher said in part: "This well, located in the San Joaquin Valley, in what is now the Maricopa Field, was started as a wildcat by the Lakeview Oil Co., a small concern, but a crooked hole in which the tools stuck discouraged the operators and they disposed of their property with the one drilling well to the Union Oil Co., which spent eight months and much money in straightening the hole. Pipe was set at 2,200 feet and drilling continued. It was not long after that, March 15, 1910, to be exact, that the well came in. It did not stop flowing until September 11, 1911, 18 months after it started producing. It is still good for 10 bbls. a day."

The late P. L. McGreal, who contributed the facts concerning the big wells in the Gulf Coast did not credit the discovery well drilled by Captain Lucas with being the largest in the field. Mr. McGreal wrote that the Lucas well was estimated at 50,000 bbls. but that Heywood Brothers' completed one in the same territory which was credited with a 90,000-bbl. initial output. "These were very likely greatly exaggerated as there was no way of correctly gauging the gushers," the writer concluded.

George Blardone, The Oil and Gas Journal's Mexican correspondent, contributed the data on big wells in Mexico. The Mexican Eagle Oil Co.'s No. 4 Potrero del Lano completed near the close of 1910, caught fire soon after it came in. When the fire was extinguished the well started at 25,000 bbls. a day and continued producing for nearly eight years and yielded altogether 115,000,000 bbls. of oil. The Huasteco Petroleum Co.'s No. 7 Juan Casiano, which came in in the fall of 1910, started at 50,000 bbls. and yielded altogether 75,000,000 bbls. The Huasteco Petroleum Co.'s No. 4 Cerro Azul, which came in February 10, 1916, produced 65,000,000 bbls. in seven years and six months, or up to the time Mr. Blardone wrote his article, and was still producing 35,000 bbls. a day.

Discuss Changes in Natural Gasoline

California Manufacturers in Two-Day Meeting Hear of New Development in Utilization and New Methods of Testing

By L. P. Stockman

LOS ANGELES, Calif., Nov. 16.—The California Natural Gasoline Association closed its two-day fall meeting here tonight with a banquet and vaudeville show at the Biltmore Hotel. Nearly 500 were in attendance. The session just closed was of two days duration, starting at 9:30 a. m. yesterday and ending at 4:30 p. m. today. The morning and afternoon sessions on each day were exceptionally well attended and the numerous discussions following each paper is the best criterion of their reception.

Dr. George Granger Brown, professor of chemical engineering, University of Michigan, and director of research for the Natural Gasoline Association of America, occupied the entire second day. Doctor Brown laid particular stress upon the difference between partial volatility and total volatility and in order that the term might be used with quantitative significance volatility was defined as the degree to which a fuel will vaporize under specified equilibrium conditions. Doctor Brown also brought out the fact that there is no decrease in maximum power regardless of the amount of natural gasoline blended with a good grade of gasoline, although in some cases carbureters may require adjustment. Another important point brought out was the fact that manufacturers should not use in excess of 30 per cent natural gasoline blend in temperatures above 75 degrees.

Seasonal Gasoline

Experiments also showed that it might be advisable for companies to change the blend at various periods during the year based on climatic changes. The discussion following Doctor Brown's paper brought out the fact that the automotive industry is dominated almost exclusively by automotive engineers instead of being governed to some extent by the oil industry. This domination has resulted in high speed high compression motors with small displacement, which in most instances require expert attention to secure satisfactory results. Another important point brought out was the domination of the oil industry by sales organizations with the result that the trade demands a water white product.

The antiknock fuel was also discussed at length but it seemed to be the consensus of opinion that this factor has been over rated and will result in but a temporary value from an advertising standpoint. The California members were especially interested in the discussion covering gas lock, which is believed to be due to vaporization in the carbureter. The exact cause of this troublesome factor has not yet been determined but Doctor Brown intimated that additional experimentation may be productive of satisfactory results.

Test for Gasoline Content

A paper on "Proposed Tentative Standard Pressure Charcoal Test for Gasoline Content of Natural Gas," prepared by the testing committee of the association and being a summary of its recommendations, was presented by P. S. Magruder, General Petroleum Corp., subchairman of the committee. The discussion was led by W. W. Robinson, Jr., California Gasoline Co.

The object in view is to develop a standard procedure to be used in determining gasoline content of natural gas by the 30-pound charcoal method. Recommendations consist of apparatus to be used in this work to the extent of cooling area of condensing system, accuracy to which volume and quantity are to be read or calculated, and the two principal controlling factors of the yield obtained, namely: The rate at which the gas shall be passed through the charcoal, and the point at which the test shall be terminated. Recommendations covering these two points are as follows:

Gas containing gasoline to extent of 1 gallon to 1,000 cubic feet, the rate shall be 15 cubic feet per hour.

From 1 gallon to 3 gallons, 10 cubic feet per hour.

From 3 gallons and above, 6 cubic feet per hour.

The test shall be terminated at the top of the fourth temperature rise.

Quality Survey

A paper entitled "Quality Survey of California Natural Gasoline," prepared by the specifications committee of the California Natural Gasoline Association, and presented by R. W. Garman, Union Oil Co. of California, chairman of the specifications committee. The discussion was led by D. M. Wolfe, Standard Gasoline Co.

This report gave a brief statistical report on California natural gasoline on the basis of Engler curves. It is hoped that this will inform those interested in natural gasoline what sort of gasoline is available, and furthermore, where quality improvements without too great quantity sacrifice may be possible in the future. At present one specific recommendation as made: All samples for Engler distillation should be taken at the tank pressure existing at point of sale by means of two connections to the tank, and should be carefully refrigerated to 34 degrees Fahrenheit before transfer to the Engler flask. It is also suggested that when refiners wish to limit the Engler curve at a midpoint, they use a 60 per cent reading on reverse-plotted curves.

Finally, the result of experimental work in obtaining true vapor pressure of natural gasoline at sales delivery point will be awaited with interest, the outcome to determine further work of this committee. It may be possible at some later date to recommend that vapor pressure and gravity be the only governing factors necessary; other qualifications, such as color, corrosion test, doctor test, and endpoint, to hold in all cases. A distillation test more adaptable to natural gasoline may also be developed.

Barometric Pressure

"Recommendation for Standardization of Barometric Pressure of Natural Gas Measurement," prepared in conjunction with the metering committee of the association and read by Ben Laulhere of the Southern California Gas Co. Discussion was led by Fred S. Champion of the Southern Counties Gas Co.

There has been considerable misunderstanding, that in order to make volumes comparable, the coefficients used in gas measurements should be corrected for changes in barometric pressure at the point of measurement.

This is entirely erroneous and the use of this practice is to be discouraged since it makes it impossible to figure pipe line loss, plant efficiencies, and makes gas accounting very difficult.

The Pacific Coast Gas Association recently adopted a pressure standard of 14.733 pounds for use in establishing the unit of measurement. This conforms to the accepted standard for gas testing work and the measurement of manufactured gas. There seems to be no good reason why this should not be adopted for natural gas measurement.

The barometric pressure enters into the measurement of gas only in that it is necessary to know it to arrive at the absolute pressure of the flowing gas.

Correction Methods

Several methods of making the necessary corrections due to the use of present extension tables are suggested:

1. Use of multipliers.
2. Adjustment to gauge.
3. Use of a slide rule instead of tables.

It is suggested that changes for barometric pressure corrections be made for every 200 feet change in elevation.

Vapor Tension

C. W. Gard of Union Oil Co. of California, presented a paper on "The Determination of Vapor-Tension of Volatile Liquids," a comparison of the method proposed by C. P. Beistle, United States Bureau of Explosives, with present bureau of explosives standard vapor-tension test for gasoline. Discussion was led by F. S. Burt, General Petroleum Corp.

The method of vapor pressure determination discussed in this paper deals with that method proposed by C. P. Beistle, which has been generally accepted as giving true vapor pressure indications on natural gasolines tested, however, in carrying out the test as outlined by Mr. Beistle it was discovered that errors of considerable importance existed and it was necessary to make a number of changes in the equipment in order to more closely approach the true vapor pressure of natural gasoline.

It is further pointed out that the proposed method would give a true vapor pressure on a pure liquid. There are some very obvious reasons why the method will not give a true vapor pressure determination of complex liquids such as natural gasoline.

Data are given in the paper showing the wide variation experienced in making determinations for vapor pressures of natural gasoline, using the old Bureau of Explosives bomb which has been in common use for several years, and the proposed method of Mr. Beistle.

Low Temperature Fractionation

A paper on "Analytical Gas and Gasoline Fractionation at Low Temperatures" was presented by Lester O. Warner, of Barton, Manning & Warner, consulting engineers. Discussion was led by E. D. Cumming, of the Shell company of California.

The petroleum conservation program

(Continued on Page 137)

TEST ON OSAGE NAVAL RESERVE PRESENTS INTERESTING ASPECTS

By J. L. Dwyer

During the World War the Osage Indian Tribe, moved by patriotic impulses, offered absolutely free to the Federal Government a generous portion of the potential oil lands of the Osage Nation. The idea was that the Osage lands thus offered would be used as a naval reserve for the purposes of war.

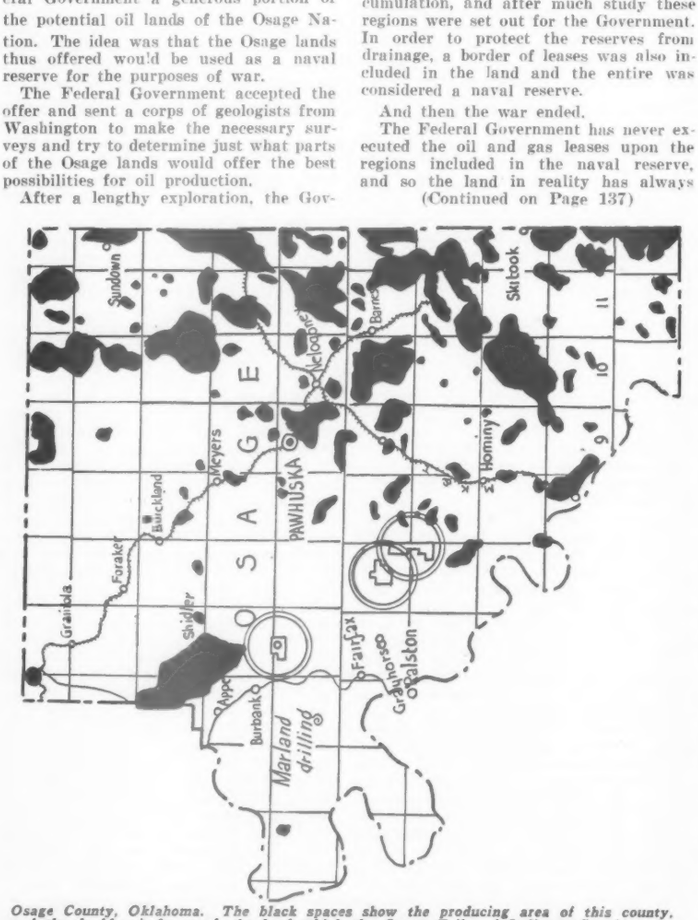
The Federal Government accepted the offer and sent a corps of geologists from Washington to make the necessary surveys and try to determine just what parts of the Osage lands would offer the best possibilities for oil production.

After a lengthy exploration, the Government geologists decided upon the three territories marked on the accompanying map with double circles as having the most favorable chances of petroleum accumulation, and after much study these regions were set out for the Government. In order to protect the reserves from drainage, a border of leases was also included in the land and the entire was considered a naval reserve.

And then the war ended.

The Federal Government has never executed the oil and gas leases upon the regions included in the naval reserve, and so the land in reality has always

(Continued on Page 137)



Osage County, Oklahoma. The black spaces show the producing area of this county, and the double circles mark the land which the Osage Tribe of Indians offered to the Federal Government as a possible Naval Reserve. The Marland Oil Co. has a gas lease upon the northwest reserve, and is drilling a test well.

Technicians Transform Oil Methods

Entire System of Conducting Business, Including Manner of Purchasing Equipment, Changed by Aid of Science

By Thomas F. Smiley

The extent to which control of the oil industry is passing into the hands of technically trained men may be realized by recalling conditions that prevailed 25 to 40 years ago and contrasting that picture with one of conditions obtaining today.

The witch hazel divining rod, whose vagaries when balanced on a trustful forefinger were supposed to reveal the presence or absence of oil beneath the ground, has given place to the seismograph, the torsion balance and the magnetometer. Its devotee has been succeeded by the geologist, along with whom have come the petroleum engineer, the chemist, the physicist and a train of other scientifically schooled men.

In that other day virtually all the operations connected with the production, transportation and refining of petroleum were conducted by men who had learned the business by growing up in it. In the small oil towns that dotted parts of Pennsylvania, Ohio, New York, West Virginia and Indiana—almost all the oil production of that period was from these five states—boys gravitated into some branch of the oil business with the same inevitableness that impels boys in agricultural regions to become farmers.

As soon as they had gained release from the village school—and usually they managed to gain it early—these boys got jobs in the oil fields or in the refineries. They learned to build derricks, to dress tools, to drill, to pump, to pull and rerun rods and tubing, and to clean out wells. Or they worked about the boilers and stills of the nearest refinery. Some learned the cooper's trade, for in the early days a cooper-shop, where barrels were made by hand, was an adjunct of the refinery.

Some Climbed to Top

Some of these embryo oil men had qualities that set them ahead of their fellows. They had ambition, application, initiative. These became the skilled workers and executives of later years. Into their hands—hands that had acquired their efficiency in the exacting school of practical experience—naturally fell the keeping of the oil industry. So long as any of these men remain in active service they will fill important places and their counsel will be sought.

But in the meantime a change has been taking place, surely, steadily, inevitably. It is no reflection on these men of the old school to say that as they drop out their places often are being filled by a different type of man, a man who probably never worked by the day and who never took his tour on the derrick floor, but who comes bringing a store of scientific knowledge which the oil industry needs and which the earlier oil men did not have.

High places in the world of petroleum will be filled in the future, as they have been in the past, by men who have worked their way from the bottom to the top by sheer force of will, character, energy and ability. It is so in other great businesses—steel, railroad, banking—and there is no reason for supposing the oil business will be an exception. But by reason of the very fact that the oil industry is appealing to science more urgently with each passing year to solve its problems, the scientifically trained men of necessity must occupy a greater and greater proportion of the supervisory positions—the presidencies, the directorates, the superintendencies, managerial places of every sort.

One need not look far today to find oil producing and transporting and refining concerns directed by men who, themselves risen from the ranks, have under them expert technologists of university training. These latter theoretically are subject to supervision, but in point of fact have virtually a free hand.

Major oil companies have their staffs of research chemists, geologists, attorneys learned in petroleum law and engineers who have specialized in some particular branch of the oil industry. Complete courses in petroleum engineering have been established by the University of Pittsburgh, University of Oklahoma, University of Missouri and University of Southern California. Besides this, the engineering courses provided by many other colleges and universities equip the student for special lines of professional work in the oil industry.

Old Methods Expensive

Commenting recently upon the metamorphosis which the oil business is undergoing, Dr. W. P. Haseman, head of the research department of the Marland Oil Co., Ponca City, Okla., and former university professor, said:

"Progress in commerce and industry necessarily is based upon science and its application. The petroleum industry in its early history failed to heed this maxim because its returns for capital invested were seemingly inadequate. But as the industry grows, and its increasingly complex problems are not so readily solved, as formerly, by emergency makeshifts and trial and error methods, it finds itself in the throes of a desperate struggle. It realizes in a measure that the old methods are too expensive and too hazardous to warrant their further use. At the same time it recognizes the fact that the safest and most economical path lies along that one that science has blazed, and it is now taking the initial steps to advance its position by placing scientists and engineers in positions of authority in every branch of the industry.

"By adopting this course many of the present day ills, real and imaginary, will subside and finally disappear when the petroleum industry solves its problems scientifically and avails itself of the advice and guidance of competent, broadvisioned, and well-trained scientists and engineers in administrative, managerial and operational matters.

"The fundamental scientific principles essential to effective control of every branch of the petroleum industry are well known and recognized. Too often failure to get results from their application is due to their misapplication rather than to a failure of the principles themselves. To assure scientific principles being properly applied, there is a most important place awaiting the thinking, creative scientist and the well-trained, skilled technologist. These individuals, if pitted against their respective tasks in a well-planned organization employing scientific methods one hundred per cent in all its branches, will do much to bring greater stability and more economic efficiency to the oil industry as a whole."

Changed Method of Buying

In no other branch of the oil business has the change under discussion been so marked perhaps as in the purchasing department, where expenditure of millions of dollars annually is determined. Not many years ago selection of immense quantities of materials for oil companies was left to minor employes in the field. A common attitude of executives was, "The men who use this stuff know best what is needed. Get what they ask for."

This method proved costly. Tools and other equipment that performed good enough service in their day became passe with the introduction of new and improved devices. Often the field worker, accustomed to a certain type or brand of equipment, was slow to change, especially if he were disposed to give ear to the blandishments of a high-powered salesman or if personal friendship chanced to be a factor. But above all else the tests applied by men of science proved unerringly and convincingly which paint would endure and which would blister, which wire rope would give honest service and which would invite expensive shutdowns for repairs, which pipe could be put underground with confidence that it would resist corrosive action and which would begin to disintegrate quickly, which among innumerable contrivances offered to the trade were meritorious and which were valueless.

And so it came about that the selection of materials has become increasingly the task for technically trained men or of the highest class of skilled workmen.

"Buying of oil-well equipment is becoming more and more a carefully thought-out proposition for men of technical training," said H. M. Cosgrove, secretary of the Purchasing Agents Association of Tulsa. "Of course, in emergencies where minor supplies are concerned, purchases usually are made in accordance with the requests of foremen in the field, without going any higher. If a bradenhead is needed suddenly it is not supposed that an oil company will call a meeting of the directors before getting one. But virtually all major purchases are made nowadays on recommendation of the oil company's technologists, and they are made through the purchasing agents, who themselves are often technically trained men who keep themselves informed regarding every new development. The purchasing agent must study the various phases of the oil and refining business and must familiarize himself with the latest inventions in order to co-operate with the executives and technologists of his company in getting precisely what is needed, and the best of its kind."

One Company's Method

The production engineering department of the Pure Oil Co. recently conducted a general field survey with a view of ascertaining definitely the losses attending the use of imperfect equipment. A report on this survey published in the Pure Oil News says in part:

"A major item in the cost of producing oil is down time and material expense caused by failure of the pumping equipment. This loss increases as the size and depth of wells increase and also with an increase in the amount of fluid lifted.

"A general field survey shows this trouble to be divided amongst equipment parts approximately as follows: Rods, 30 per cent; tubing, 20 per cent; cups, 9 per cent; engines, 6 per cent; belts, 7 per cent; rig, 5 per cent; surface equipment, 2 per cent; miscellaneous, 21 per cent.

"The test and standardization work being done by the production engineering department involves not only production equipment but drilling and tankage requirements as well."

In its tests of equipment the company has adopted the use of the dynamometer, an instrument for measuring stresses. Its experimentation in connection with the purchase of equipment is indicative of what is being done by similar companies engaged in the production, transportation and refining of oil and it affords an example of the degree to which technical knowledge has entered into the operation of the oil business.

TEXAS JOBBERS DISCUSS MEANS OF ELIMINATING PRICE CUTTING

By James H. Dameron

FORT WORTH, Tex., Nov. 21.—Meeting informally and without a prepared program the Texas Independent Oil Men's Association opened a two-day meeting in Fort Worth, Monday with the view of developing suggestions that would aid in bringing an improvement in the state market conditions. Fourteen members of the directing board were elected and they will in turn elect the new officers of the organization. No definite steps were taken as a result of the round table discussion Monday anent price wars.

R. N. Mullin, El Paso, president of the association, in his opening remarks, told the approximately 50 in attendance that a bad market existed in Texas and expressed the wish that some steps would be taken at the meeting that would lead the independent dealers to adopt some measures to remedy the situation.

A spirited and interesting discussion followed on means to combat price cutting and in particular the inroads being made on the general market position by the railroad bulk stations. One member of the association told the members the railroad bulk station was here to stay and it was up to the members to devise means of combating the low retail price offered by those dealers.

Bob Davis, of Cleveland, Ohio, told those attending the meeting the gasoline "bootlegger" and price slashers were here to stay and the evil must be recognized. He added there were three classes of trade to be catered to by the retailers of refined products: the bargain hunter for gasoline, those who wanted good gasoline and expected to pay a fair price for it, and those who wanted a high-priced gasoline.

He declared the first were in the minnority and that there were only a few who wanted high-priced gasoline. Those, he said, were usually persons who could afford to pay a high price for gasoline and were reluctant to buy gasoline unless its price was high.

Railroad Bulk Station

The railroad bulk station was characterized as one which brought the bargain hunter into prominence. A general downward trend in wages in certain occupations was blamed for the bargain hunters. In revising their expenditures to conform with their incomes they were forced to seek lower priced gasoline and give little heed to the quality. It was pointed out that the railroad stations received little tourist trade and that the tourist usually bought a standard brand of gasoline.

How to Compete

In discussing the price cutting evil, a member from Wichita Falls, Tex., related how one company there was meeting with success. Rather than cut prices to meet the low-priced competition that company started building its stations up in service to a point where it approached the super station type of service.

A complete line of automobile accessories was stocked in the stations and efforts made to interest the trade in those items. More personal attention was given to each car coming to the station and the stock of accessories served to attract new business.

The result was satisfactory to the company owning the service stations and price cutting in that particular city has little effect upon that company's sales. All of the accessories are sold for a prof-

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Bowers Pool Has 250 Bbls. an Hour Well

Several Tests in Wildcat Areas Feature of Panhandle Activity. Good Prospect in McIlroy Pool

By James H. Dameron
Staff Correspondent, Texas Panhandle Fields

AMARILLO, Tex., Nov. 21.—A 250-bbl. per hour well in the Bowers Pool of Gray County was the chief development in the Panhandle during the past week while several tests in wildcat areas added spice to the week's activities.

Danciger Oil & Refining Co.'s No. 3 Jackson, NW Section 88, Block B-2, flowed 250 bbls. the first hour from the second granite wash pay bottomed at 2,972 feet. The first pay was at 2,944-48 feet with rotary tools and 6-inch pipe cemented at 2,948 feet.

In the same county and west of the Pampa Pool, Empire Gas & Fuel Co.'s No. 1 Meers, NE SE Section 107, Block, was drilled deeper to granite wash pay at 3,306-28 feet and flowed 440 bbls. the first 24 hours, 240 bbls. the second and 230 bbls. the third. The well was completed late last March at 3,172 feet in granite was making 35 bbls. daily. It made 35 bbls. after a 150-quart shot at 3,109-68 feet.

Late in the week Riley & Heck sold their Gray County block which has a small well on it to Danciger Oil & Refining Co. for a reported consideration of $200,000. According to the report the property sold for $60,000 cash, $40,000 in deferred payments and $100,000 in oil.

Roxana Petroleum Corp. has another good-looking prospect in the McIlroy Pool of southeastern Hutchinson County in its No. 2 Cockrell in the north half SE Section 3, Block B-3. It is an offset to No. 1 Cockrell which was a gusher type well. No. 2 had the pay at 2,958 feet and the hole filled with oil. Storage is being erected and the well will be drilled in upon completion of the tankage.

Oil Showing in Sherman

Sherman County came into prominence during the week with gas showings and a trace of oil showing in one of the two wells showing gas. Gibson Oil Corp.'s No. 1 Bivins, Section 33, Block B-3, southeast Sherman County, had 2,000,000 feet of gas at 3,120 to 3,220 feet and got 4,000,000 feet more at 3,120-90 feet. However, when the well was drilled on down to 3,325 feet 2,000 feet of water rose in the hole.

With the water a small trace of oil was found. The bit stopped in a sandy dolomite formation and the oil showing has given some encouragement. Geologists are of the opinion the water showing does not condemn the immediate area.

Seven miles west of the Gibson Corp. test, Phillips Petroleum Co.'s No. 1 Price & Fuqua, Section 35, Block B-2, and about 3 miles east of Coldwater, encountered 1,500,000 feet of gas at 3,325 feet. A few hours later the gas was ignited and fired the rig. The drilling crew snuffed out the fire with boiler steam after it had destroyed the derrick. A new derrick is being erected and the test is to be drilled down.

Production in the Panhandle was off 1,700 bbls. during the past week due to a general decline in old wells and the scarcity of new production. New locations being reported, however, indicated a slight increase in activity in that area. Total operations for the Panhandle during the past week totaled 210 divided as follows: 4 first reports, 12 locations, 5 rigs building, 17 rigs standing, 10 being rigged; 90 wells drilling, 65 wells shut down and 7 completions.

New Locations

New locations reported late in the week are as follows:

Potter County: Prairie Oil & Gas Co.'s No. 1 Lee Bivins, 660 feet from the south line and 330 feet from the east line, Surveys 39, Block M-20, G. & M. Survey.

Hutchinson County: Skelly Oil Co.'s No. 2 Armstrong & Boyd, 892 feet from the south line and 2,741 feet from the east line of Mrs. F. J. Bellows' tract just east of the Moore County line.

Gray Couunty: Magnolia Petroleum Co.'s No. 1 J. J. Wall, 330 feet each way from NE cor., Section 162, Block 3, I. & G. N. Survey. Skelly Oil Co.'s No. 1 C. W. Bradford, 330 feet from the NE cor. NE, Section 118, Block B-2, H. & G. N. Survey.

Wheeler County: J. B. Clark and associates' No. 1 J. W. Gordon, C NE NW, Section 107, Block 23, H. & G. N. Survey.

Completions in Panhandle during the past week were a few above the average number in that area due to the completion of several wells that have been in the completion stage for several weeks.

Hutchinson County

Midwest Exploration Co.'s No. 7 J. A. Whittenberg was shot with 20 quarts at 2,944-60 feet and is swabbing 20 bbls. daily. No. 8 on the same lease is pumping 10 bbls. after a 40-quart shot at 2,-940-60 feet.

Moore County

Skelly Oil Co.'s No. 1 Armstrong & Boyd which was completed some time ago at 3,294 feet was plugged back to 3,235 feet and shot with 20 quarts at 3,200-32 feet and made 140 bbls. the first 24 hours after being cleaned out. The well is now making 95 bbls. daily.

Potter County

Amarillo Oil Co.'s No. 1 Masterson-B was completed as a 50,000,000-foot gas well at 2,030 to 2,375 feet.

Carson County

Empire Gas & Fuel Co.'s No. 5 Burnett made 41,000,000 feet of gas from 2,175 to 2,412 feet. Magnolia Petroleum Co.'s No. 5 fee No. 244, made 220 bbls. initial from 3,158 feet; the pay was topped at 3,090 feet. Stubblefield and associates' No. 1 E. Cooper is swabbing 40 bbls. daily from 3,090 to 3,122 feet.

Gray County

C. B. Shafer and associates' No. 1 G. Cole was junked and temporarily abandoned at 3,313 feet with a good show on bottom.

King County

Midwest Refining Co.'s No. 1 Patton was a failure at 3,500 feet with a hole full of water.

WILDCAT OPERATIONS IN PANHANDLE

Week Ending November 19, 1927

ARMSTRONG COUNTY

Company, Well, Farm, Name, Section and Block—	Remarks—
Meadows et al's No. 1 E. D. Harrel, C Sec. 100, Blk. A-6, A. & G. Sur.	900 ft. wtr., 4,605 ft; S.D., 4,700 ft.
United Oil & Trust Co.'s No. 1 J. P. Reck, Sec. 162, Blk. 4, H. & G. N. Sur.	Spudded and temp. abd., 298 ft.

BAILEY COUNTY

Gibson Oil Co. et al's No. 1 Webb Miller, NE cor. Sec. 15, League 186, Swisher County school land	Rig.
Humble O. & R. Co.'s No. 1 W. H. Fuqua, C E ½, Sec. 117, Blk. A, Melvin, Blum & Blum Sur.	T.D., 1,740 ft., U.R. 10-in.

BRISCOE COUNTY

C. S. Rice's No. 1 J. C. Anderson, SE cor. NW NW, Sec. 22, Blk. B-3, B. S. & F. Sur.	S.D., 1,620 ft.

CARSON COUNTY

Amatex Dev. Co.'s No. 1 E. S. Polling, Sec. 22, Blk. 2-Y.	S.D., 2,110 ft.
Empire G. & F. Co.'s No. 6 Burnett est., C NE, Sec. 62, Blk. 5, I. & G. N. Sur.	Drlg., 2,350 ft; 23,000,000 ft. gas.
Empire G. & F. Co.'s No. 8 Burnett est.	Drlg., 2,030 ft.
Marston Oil Co.'s No. 1 J. L. Noel	S.D., 3,064 ft.
Navajo Oil Co.'s No. 1 E. S. Polling, Sec. 22, Blk. 2-Y.	Set 6-in., 3,496 ft; S.D., 2,712 ft.
The Texas Company's No. 2 C. R. Garner	Drlg., 330 ft.
The Texas Company's No. 1 Chas. Kalka	Rig.
R. M. Waggoner's No. 1 J. W. McConnell (was completed for 37,000,000 ft. of gas, 2,255-2,500 ft.)	Top pay 3,250 ft., S.D., 3,295 ft. for pipe line, swabbing and spraying 5 bbls. per day.
Willis et al's No. 1 Burnett est., C SE SW NW, Sec. 111, Blk. 5	Rigging up standard tools 2,300 ft.

CASTRO COUNTY

Colorado O. & R. Co.'s No. 1 M. Slemmons, SW cor. Sec. 78, Blk. M-17, B. S. & F. Sur.	Rig blown down.
Mystery Oil Co.'s No. 1 J. I. Crum, SE cor. NE, Sec. 333, Blk. M-6, S. K. & K. Sur.	S.D., 510 ft. for casing.

CHILDRESS COUNTY

Continental Oil Co.'s No. 1 B. P. Smith, C NE, Sec. 14, Blk. 9	Wtr., 2,450 and 2,800 ft; 100 ft. sulphur water, 3,350-55 ft; S.D. for 5-in.
Hoover & Calloway's No. 1 O. L. Tucker, Sec. 736, Haggard Sur.	Spudded and S.D.
C. L. Sloane et al's No. 1 B. P. Smith, Sur. 49, F. P. Knott lands	Set 6-in. pipe, 2,902 ft; T.D. 3,050 ft; S.D., 3,200 ft.

COTTLE COUNTY

Exploration Co.'s No. 1 Richards	Spudded and S.D.

DALLAM COUNTY

Wood Bros. et al's No. 1 Capitol Synd., Sec. 19, Blk. 17.	Hole full wtr., 4,007-4,127 ft; T.D. 4,188 ft; S.D. until Spring.
Marland Oil Co.'s No. 1 A. M. James, C SW W ½, Sec. 21, S. H. McElreath Sur.	T.D., 2,445; U.R. 8in.
Marland Oil Co. et al's No. 1 Capitol Synd., Sec. 36, Blk. 18, Capitol Synd. land	T.D., 2,910 ft; U.R. 8-in.

DONLEY COUNTY

A. T. Drlg. Co.'s No. 1 F. E. Harrington, Sec. 39, Blk. 3-C	1,200 ft. wtr., 3,115-22 ft; show gas, 3,140-60 ft; dry grnt. wash, 3,260-93 ft; S.D., 3,498 ft.

FLOYD COUNTY

Expltn. Co.'s No. 1 S. H. Boone, C. C. H. Johnson Sur.	Spudded and S.D.
Expltn. Co.'s No. 1 Land & Cattle Co.	S.D., 780 ft. for orders.
Hoffer Oil Corp.'s No. 1 Nelson	Rig on ground.

GRAY COUNTY

Archer Blake's No. 1 Turneaux, SW cor, Sec. 111, Blk. B-2	Drlg., water well.
Amogray Oil Co.'s No. 1 A. Chapman, SW NW SW, Sec. 9, Blk. 26, H. & G. N. Sur.	2,000,000 ft. gas, 2,150-55 ft; 15,-000,000 ft. gas, 2,240 ft; grnt. wash, 2,610-15 ft. and 2,633-25 ft; T.D., 2,785 ft., swab and flow 99 bbls. daily.
Bay Shore Oil Co.'s No. 1 C. W. Bradford, Sec. 143, Blk. 2-B	T.D., 2,715 ft; cement, 8-in. 2,659 ft., trying to shut off gas.
Camel Oil Co.'s No. 1 Harrah, Sec. 163, Blk. 3, I. & G. N. Sur.	Pay, 3,121-33 ft; increase 3,136 and 3,185 ft; flowed 60 bbls. daily, 3,265 ft; one baller wtr., 3,350 ft; plugging back to 3,285 ft. and will shoot.
Camel Oil Co.'s No. 1 B. E. McKinney	Rig.
Cole O. & G. Co.'s (was Magdalene Oil Co.'s) No. 1 J. E. Williams, Sec. 17, Blk. 1	S.D., 3,860 ft.
Danciger et al's No. 2 W. Jackson, SW SE NW, Sec. 88, Blk. B-2	T.D., 2,750 ft., run 8-in.
Danciger et al's No. 3 W. Jackson, SE SW NW, Sec. 88, Blk. B-2	T.D., 2,948 ft., spraying.
Danciger et al's No. 4 W. Jackson	Drlg., 2,560 ft.
Donley Gray Oil Co.'s No. 1 J. W. Gordon, Sec. 79, Blk 3.	Wtr., 3,380 ft. and 3,430 ft; show oil; S.D., 3,460 ft.
Delaney et al's No. 2 Jackson	Drlg., 1,170 ft.
Edwards et al's No. 1 E. J. Case, NE cor. Sec. 152, Blk. B-2, H. & G. N. Sur.	70,000,000 ft. gas, 2,512-2,630 ft; fishing, 3,025 ft. for bit.
Empire G. & F. Co.'s No. 1 Sarah George, Sec. 151, Blk. 3, I. & G. N. Sur.	10,000,000 ft. gas, 3,080-3,130 ft; 800 ft. oil, 3,150-58 ft; increase 3,220 and 3,317 ft; drlg., 3,317 ft.
Empire G. & F. Co.'s No. 1 J. F. Meers	Flowed 440 bbls. gran. wash., 3,-306-28 ft; now flows 10 bbls. per hr; may deepen.
Gardner et al's No. 1 G. H. Saunders	Cellar.
Gibson Oil Corp.'s No. 2 J. B. Bowers	Lost hole, 2,910 ft; skidded rig; drlg., 1,550 ft.
Gurnsey Oil Co.'s No. 1 B. E. McKinney	Drlg., 950 ft.
Lefors Pet. Co.'s No. 1 Leach, Lefors Townsite	10,000,000 ft. gas, 2,440-50 ft; 70,000,000 ft. gas, 2,625 ft; T.D., 2,650 ft; trying to pull 8-in. and it parted; fishing.
H. C. McCauley et al's No. 1 J. Morse, Sec. 2, Blk. 46, H. & G. N. Sur.	T.D., 1,585 ft; U.R. for 8-in.
Magnolia Pet. Co.'s No. 1 J. Bowers	Drlg., 400 ft.
Magnolia Pet. Co.'s No. 1 J. J. Wall, NE cor., Sec. 162, Blk. 3, I. & G. N. Sur.	New location; cellar.
Midwest Expltn. Co.'s No. 1 J. Bowers	Drlg., 1,020 ft.
Navilius Oil Co.'s (was Sullivan et al's) No. 1 fee, NW cor. E ½ SW, Sec. 1, Blk. 1, A. C. H. & B. Sur.	3,000,000 ft. gas, 2,170-80 ft; 30,-000,000 ft. gas, 2,240-90 ft; 15,-000,000 ft. gas, 2,370-90 ft; show oil 2,601-08 ft., 2,750-57 ft., 2,-797-2,801 ft., 2,808 ft. and 2,-818-26 ft; T.D., 2,839 ft.

(Continued on Page 139)

PIPE LINE DEAL CLOSED

PITTSBURGH, Pa., Nov. 19.—The deal that has been pending for some time between the South West Pennsylvania Pipe Line Co. and the Pittsburgh Pipe Line Co. has been consummated, the former taking over the latter's pipe line system, consisting of 120 miles of gathering lines in Allegheny County. The amount of oil run through the Pittsburgh Pipe Line Co.'s lines had fallen very low, amounting to between 5,000 and 6,000 bbls. a month. The South West Pennsylvania Pipe Line Co. will continue to operate the recent purchase in connection with its own lines, which practically parallel the purchased lines. The consideration was $60,000, to be paid in cash. The South West Pennsylvania Pipe Line Co. can operate the purchased lines at very little additional expense. W. H. Fehfenfeld, Baltimore, president of the Pittsburgh Pipe Line Co., and T. C. Towl, Pittsburgh, superintendent of the South West Pennsylvania Pipe Line Co., conducted the negotiations and closed the deal.

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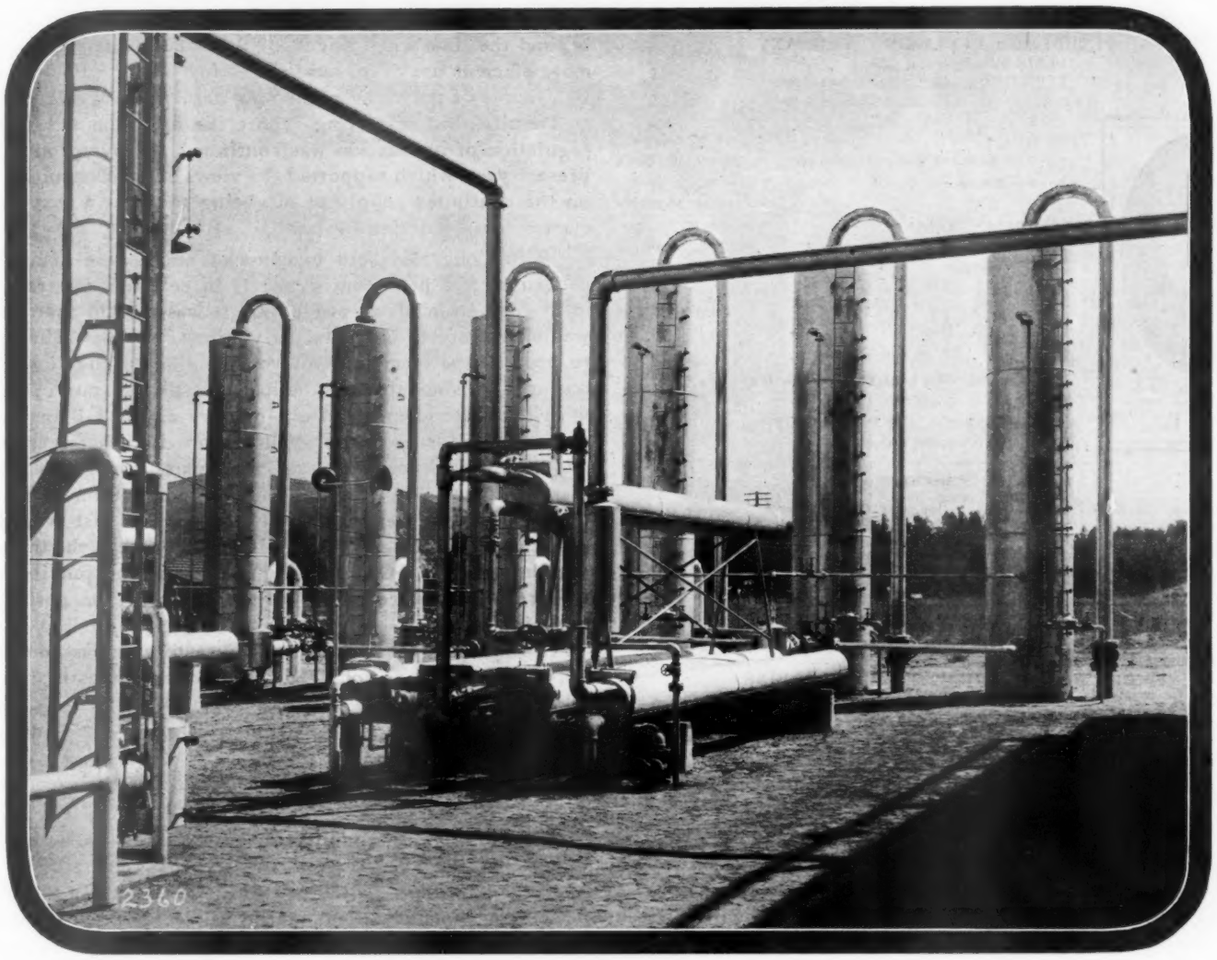

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"THE OIL INDUSTRY'S ANSWER TODAY"

At the height of the agitation for government control of gasoline prices The Oil and Gas Journal compiled and issued the since famous publication known as "The Oil Industry's Answer," presenting the industry's case so convincingly and completely that its facts and argument have been used in every statement issued on behalf of the industry up to the present time.

"The Oil Industry's Answer" was published originally in the regular issue of The Oil and Gas Journal of March 20, 1924, and was afterward reprinted in booklet form and sent to the President of the United States, members of the cabinet and principal government officials at Washington, every member of the Senate and House, the Governor and Attorney-General of every state and the editors of the leading newspapers. Oil companies, in addition, recognizing the value of the publication was dependent on its use, distributed over 100,000 copies throughout the country. Reprints of special articles were broadcast at filling stations to the industry's customers, who for the first time were given an easily understood and truthful picture of the industry which supplies them with their motor fuel.

The popular agitation over gasoline prices has practically disappeared, the public being satisfied they are getting their money's worth at the service station even with the addition of the increasing tax levied by the states. "The Oil Industry's Answer" of 1924 was certainly effective.

But a new situation confronts the industry today. Instead of being limited to government control of gasoline prices the critics of the industry now want government control of the production of oil, restriction of the uses of its bulk product, fuel oil, and official regulation of its every operation, all on the plea of conserving the Nation's oil supply for the national defense.

For more than two years the Federal Oil Conservation Board, composed of the Secretaries of the Interior, War, Navy and Commerce Departments, conducted an inquiry into the whole process of oil production and refining. Public hearings were held at which leaders in the industry sat in conference with these members of the cabinet and placed their entire case on the table, winning the thanks of the Board for "the helpful assistance rendered by the industry."

During the hearings the Committee of Eleven named by the American Petroleum Institute to make an investigation of the petroleum situation in the United States presented its report on supply and demand, indicating that "there is no imminent danger of the exhaustion of the petroleum reserves of the United States; that it is reasonable to assume that a sufficient supply of oil will be available for national defense and for essential uses in the United States beyond the time when science will limit the demand by developing more efficient use of, or substitutes for, oil, or will displace its use as a source of power by harnessing natural energy."

Despite this reassuring report the agitation for governmental regulation of production was continued, the overproduction of the present year, which supported the views of the Committee of Eleven on the continued supply of oil, being taken as a text for renewed clamor for restriction by law.

With Congress about to convene, on the eve of a presidential campaign, and persistent demands in certain quarters for government regulation of oil production it was certain that the industry was once more to be made the victim of attack. The opportunity to pose as the champions of conservation of the Nation's natural resources was not likely to be lost by aspiring statesmen, especially with the often denounced oil industry as the villain of the piece.

So the industry may as well prepare for what is coming. If it sits silently contemptuous of the misrepresentation its attitude, instead of being taken for righteous indignation, will be assumed to be because it has no answer. It worked that way during the agitation of gasoline prices and it was only when the industry spoke out through "The Oil Industry's Answer" and put its case before Congress and the country that the justice of its position was admitted.

In this emergency, as in 1924, The Oil and Gas Journal felt it a duty to undertake to voice the answer of the industry. It has painstakingly and carefully prepared "The Oil Industry's Answer Today," which will be published in the December 1 issue of The Oil and Gas Journal and be placed before the American Petroleum Institute when it assembles at Chicago and the members of Congress when they convene in Washington.

The value of this publication to the industry, as in the case of "The Oil Industry's Answer" in 1924, will consist of the use made of it. It is primarily designed for readers outside the industry, in terms they can understand, stating the case of the industry against any form of governmental regulation, federal or state, and showing that the main obstacles to prevention of overproduction can best be overcome by co-operation within the industry itself.

Oil men and oil companies awake to the peril of congressional interference and aware of their responsibility will, we believe, be as actively interested in seeing that "The Oil Industry's Answer Today" is as effectively used as was "The Oil Industry's Answer" of 1924, which has been quoted and requoted, printed and reprinted continuously ever since.

It will be shown that governmental regulation of oil production and restriction of the use of fuel oil are impossible under the constitution and impractical, even if legally possible.

It will be shown that the only thing the Government can do to assist in checking overproduction of oil is to remove the fear of prosecution under the antitrust act which prevents the oil industry generally from the very conservation of oil which the Federal Oil Board demands.

In proof of the ability of the industry to regulate production in line with the demand of consumers specific instances will be cited where operators in certain fields have, at their own risk, co-operated in agreements to avoid overproduction, without any effect on prices to the public and solely in the interest of conservation of our oil supply.

What the industry has done in that direction can be done generally if the fear of governmental interference is removed, as Chairman Work and Secretary Hoover have declared it should be.

"The Oil Industry's Answer Today" will, when given nationwide publicity, correct popular misunderstanding regarding the effect of governmental regulation upon the industry and the public, and successfully combat misdirected efforts in Congress to shackle the industry upon which the present and continued prosperity of the nation depends.

DRESSER COUPLINGS

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WILDCAT OPERATIONS IN WEST TEXAS

Week ending November 19, 1927

Company, farm and location—	Remarks—
ANDREWS COUNTY	
George B. Calvin's (was Calvin & Belt's) No. 1 Ratliff & Bedford, C NE Sec. 16, Blk. A-54	Hole full fresh water 1,055 ft.; top salt 1,610 ft.; total depth 2,575 ft.; shut down.
J. S. Cosden's No. 1 Ratliff & Bedford, C SE Sec. 8, Blk. 73, Public School Land	Top salt 1,585; shut down 3,600 ft.
Sartain Oil Co. et al's (was Deep Rock Oil Co.'s) No. 1 W. J. Harris, C SE Sec. 12, Blk. A-46, Public School Land, elev. 3,167 ft.	Hole full fresh water 1,050 ft.; shut down 1,260 ft.
B. B. McKennon's (was Neff et al's) No. 1 J. S. Means, C SE Sec. 12, Blk. A-35, Public School Land	Drlg. 1,200 ft.
A. G. Carter & Zweifel's No. 1 Cowden, C SE Sec. 16, Blk. A-62, Public School Land Sur., elev. 3,156 ft.	Top salt 1,375 ft.; encountered pocket of air 3,635 ft.; drilling 4,607 ft.
BORDEN COUNTY	
Marland Oil Co.'s No. 1 G. E. McDavid, C SW Sec. 156, Blk. 25, H. & T. C. Sur.	Spudded and shut down for water line.
BREWSTER COUNTY	
Cady & Keller's No. 1 Decies	Location.
Mid-Kansas O. & G. Co.'s No. 1 Turney, Sec. 77, Blk. 213, T. & St. L. Sur.	Drlg. 1,560 ft.
Reese & White's No. 1 Kimbale, C NE Sec. 204, Blk. 9, G. H. & S. A. Sur.	Shut down for casing 530 ft.
Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 mi. S of Alpine	Shut down 1,025 ft.
Wilcox & Anderson's No. 1 Gage, Sec. 8, Blk. 300, T. C. R. R. Sur.	Shut down 1,500 ft.
COKE COUNTY	
W. H. Brown et al's No. 1 W. L. Foster, SE cor. Sec. 142, Blk. 2, H. & T. C. Sur., elev. 2,222 ft.	Shut down 2,250 ft.
Danciger O. & R. Co.'s No. 1 Mrs. Byrnes, Clinton Sur.	Drilling 2,830 ft.
Lipan Oil Co.'s No. 1 S. M. Conner, Sec. 71, Blk. 2, H. & T. C. Sur.	Show oil 1,224-34 ft.; drlg. 2,885 ft.
Lipan Oil Co.'s No. 1 E. C. Rawlings, Sec. 390, Blk. 1-A, H. & T. C. Sur., elev. 2,750 ft.	Total depth 2,736 ft.; drlg. 2,718 ft.
CONCHO COUNTY	
Parks & Lawson's No. 1 Schultz	Show oil 925 ft.; shut down 957 ft.
The Exploration Co.'s No. 1 Hartgrove, Blk. 240, J. Schouch Sur., elev. 1,718 ft.	Fish. bit 715 ft.
CRANE COUNTY	
Crane Dev. Co.'s No. 1 J. R. Mosley, S cor. Sec. 18, Blk. 6, H. & T. C. Sur.	Shut down 400 ft.
Marland Oil Co.'s No. 1 Union Land, E cor. of W Sec. 28, Blk. 35, H. & T. C. Sur., elev. 2,298 ft.	Top salt 825 ft.; 1,300 ft. sulphur water at 2,100 ft.; flowing sulphur water 2,265 ft.; shut down.
Duffey & Gault & Brown's No. 1 Cowden, CNL S half NE Sec. 22, Blk. X, C. C. S. D. Sur.	Hole full fresh water 620-25 ft.; top salt 895 ft.; top lime 2,729 ft.; total depth 2,754 ft.; run. 8-in.
Gulf Prod. Co.'s No. 3 W. N. Waddell, SE cor. NE Sec. 3, Blk. B-25, Public School Land	Rigging up.
J. K. Hughes Dev. Co.'s No. 1 State Bank Commission, CSL Sec. 16, Blk. 4, H. & T. C. Sur.	Location.
Texas Development Co.'s No. 1 J. Cowden	Total depth 3,850 ft.; was temp. abd. last summer; rigging up to deepen; top lime 2,635 ft.
CROCKETT COUNTY	
George Anderson and Marland Oil Co.'s No. 1 University	Hole full sulphur water 1,800 ft.; ½ bailer oil 2,340 ft.; ⅛ bailer sulphur water per hour 2,475 ft.; shut down 2,521 ft.
V. T. Bolin & Co.'s No. 1 P. C. Coates, NW cor. SW Sec. 4, Blk. 2, I. & G. N. Sur.	Shut down 2,110 ft.
Corbett & Gill's No. 1 University	Top salt 855 ft.; smell gas 1,300 ft.; drlg. 1,950 ft.
J. S. Cosden, Inc., No. 1 Paul Perner, SW cor. Sec. 36, Blk. 2, I. & G. N. Sur.	Shut down 350 ft.
Gulf Prod. Co.'s No. 3 Thompson	Drlg. 35 ft.
C. A. Jones et al's No. 1 Powell	Top salt 1,050 ft.; hole full water 2,245 ft.; drlg. 2,300 ft.
James Kelly et al's (was Corbett & Gill's) No. 1 Todd, C NE Sec. 43, Blk. WX, G. C. & S. F. Sur.	Top salt 993 ft.; show oil 1,948 ft.; drlg. 2,450 ft.; 700 ft. sulphur water in hole.
Van McPhail's No. 1 George Thompson	Location.
Van McPhail et al's No. 1 George Thompson	Location.
Magnolia Pet. Co.'s No. 2 Shannon	Show oil 2,285-90 and 2,993 ft.; total depth 4,100 ft.; fishing 20 joints 8-in. casing.
Newman Oil Co.'s No. 1 B. C. Clark	Top salt 640 ft.; base salt 1,315 ft.; show oil 2,055 ft.; sulphur water 2,106 ft.; top lime 1,930 ft.
Osage Oil Corp.'s No. 1 H. M. Halff	Spudding 50 ft.
Bob Penn's No. 1 L. P. Powell	Drlg. 750 ft.
William Shaffer et al's No. 1 University, C SE SE Sec. 9, Blk. 47, University Sur., elev. 2,344 ft.	Shut down 2,344 ft.
William Schaffer et al's No. 2 University, 1,350 ft. N and 2,610 ft. E of SW cor. Sec. 9, Blk. 47, University Land	Top salt 1,060 ft.; first oil show 2,190-96 ft.; second 2,225-29 ft.; 1 bailer oil in 10 hrs. at 2,590 ft.; shut down 2,625 ft.; brown lime.
Simmons Oil Co. et al's No. 1 H. M. Halff, NW cor. Sec. 69, Blk. 1, I. & G. N.	Spudding 60 ft.
W. W. Donnelly & Young's No. 1 Massey, Sec. 29, Blk. U-V	Shut down 150 ft.
McManmon Oil Co.'s No. 1 Blakeney	Shut down 3,775 ft.
World Oil Co.'s No. 1 Schneeman-B, Sec. 50, Blk. BB, G. C. & S. F. Sur.	Top salt 1,070 ft.; hole full sulphur water 2,210-15 ft.; fishing 2,255 ft.
Young & Donnellys' No. 1 J. M. Shannon, C Sec. 11, Blk. 9, D. & S. E. Sur.	6,000,000 ft. gas at 1,662 ft.; shut down 1,676 ft.
CULBERSON COUNTY	
Deep Rock Oil Co.'s No. 2 Kloh-Rumsey, Sec. 21, Blk. 29, T. & P. Sur., T-1 (NE of No. 1)	Drlg. 630 ft.
James H. Gardner et al's No. 1 Radford, C SE Sec. 29, Blk. 62, Public School Land Sur.	Straightening hole 610 ft.
Scott & Dittman's No. 1 Miller, SW cor. NW NE Sec. 1, School Blk. 97	Spudding 75 ft.
ECTOR COUNTY	
The Texas Company and Cosden's No. 1 W. E. Connell, SE cor. Sec. 24, Blk. B-16, School Land	Top salt 950 ft.; drlg. 1,080 ft.
FISHER COUNTY	
Cranfill & Reynolds' No. 1 J. A. Young, Sec. 208, B. B. B. & C. Sur.	Total depth 1,110 ft.; clean. out.
Ideal Oil Co.'s No. 1 Jameson, C SE Sec. 111, Blk. 1, H. & T. C. Sur.	Hole full salt water 2,345-2,520 ft.; shut down 2,304 ft.
Marland Oil Co. and Texon's No. 1 McCall, Sec. 108, Blk 2, H. & T. C. Sur.	Rig.
R. W. Raney's No. 2 Maberry, Sec. 56, Blk. 1, T. & P. Sur.	Shut down for orders 2,725 ft.
The Texas Company's No. 1 D. S. Stevens, C SW SE SE Sec. 79, Blk. 1, H. & T. C. Sur.	Total depth 1,325 ft.; clean. out.
FOARD COUNTY	
Clark et al's No. 1 Atkins	Lime 1,580-1,930 ft.; show gas 1,885 ft.; drlg. 2,360 ft.
Fain-McGaha Oil Corp. et al's No. 1 Mathews	Total depth 3,550 ft.; plugged back to 1,506 ft.; swabbing sand 1,484-92 ft.; makes 8 bbls. gas dead oil.
The Texas Company's No. 1 Watkins	Drlg. 3,020 ft.
GAINES COUNTY	
Westheimer & Daube's No. 1 Birge & Forbes Land Co., Sec. 308, Terrell County School Land	Cemented 8-in. 3,900 ft.; underream. 4,650 ft. (approx.).
GARZA COUNTY	
Emerald Oil Co.'s No. 1 D. Boren, NW cor. N ESec. 137, Blk. 5, H. & G. N. Sur.	Small show oil in gray lime 1,884-1,902 ft.; shut down 2,600 ft.; show oil and hole full water 2,420-60 ft.
Gulf Prod. Co.'s No. 1 E. P. Swenson-A, Sec. 67, Blk. 2, H. & G. N. Sur.	Drlg. 600 ft.; top salt 495 ft.
GLASSCOCK COUNTY	
California Co.'s No. 2 W. B. Currie, Lease 1, NE cor. NW Sec. 213, Blk. 29	Drlg. 1,475 ft.
Texon & Marland's No. 1 Settles	Rigging up to deepen; total depth 1,301 ft.
HOWARD COUNTY	
California Co.'s No. 1 Fisher Bros., SE SW NW Sec. 36, Blk. 33, T. & P. Sur., T-1-S	Shows oil 1,530-48 ft. and 1,562-66 ft.; hole full water 2,020-34 ft.; hole full salt water 2,750-75 ft.; drlg. 2,910 ft.
Coyle-Concord Oil Co.'s No. 1 Dora Roberts	Cem. casing 1,588 ft.
Dixie Oil Co.'s No. 1 H. R. Clay	Landed 8-in. at 1,972 ft.
W. W. Donnelly et al's No. 1 Martin, SE cor. Sec. 41, Blk. 33, T-2-N, T. & P. Sur., elev. 2,552 ft.	Temp. aban. 3,203 ft., contract depth.
Henshaw et al's No. 1 W. R. Settles, SW SE SW Sec. 135, Blk. 29	Hole full sulphur water 1,335-80 ft.; total depth 1,900 ft.; shut down.
Marland Oil Co.'s No. 1 Clay-E, NW NE SE Sec. 138, Blk. 29	Pay 2,480-2,500 ft.; swabbed approx. 160 bbls.; total depth 2,790 ft.; rig burned down; rebuilt; clean. out.
Marland Oil Co.'s No. 2 Clay-E	Rigging rotary.
Marland Oil Co.'s No. 1 Richardson, C NW Sec. 12, Blk. 32, T. & P. Sur., T-1-S	Total depth 495 ft.; rebuilt rig; pull. 15-in. pipe.
Marland Oil Co. and Zoch's No. 1 Jones, Sec. 32, Blk. 27, T. & P. Sur., elev. 2,218 ft.	Shut down 500 ft.
Marland Oil Co.'s No. 1 A. M. Fisher, Sec. 1, Blk. 33, T. & P. Sur., T-2-S, elev. 2,730 ft.	Sulphur water 3,315-25 ft.; shut down for plug. orders 3,850 ft.
Mayo, Nixon & Flowers' No. 1 W. J. Flowers	Rotary rig.
Miley and Marland Oil Co.'s No. 1 C. D. Read, C NW Sec. 12, Blk. 31, T. & P. Sur., T-1-N	Location.
Owens & Sloan's No. 2 Dora Roberts, SW cor. SE Sec. 136, Blk. 29	Drlg. 1,000 ft.
Peer Oil Corp.'s No. 1 Read, C NW Sec. 39, Blk. 30, T. & P. Sur., T-1-N	Hole full salt water 2,790-2,820 ft.; total depth 2,835 ft.; bail.
Texon O. & L. Co. and Marland Oil Co.'s No. 1 Mrs. Connaly, NE cor. Sec. 15, Blk. 33, T. & P. Sur., T-1-S.	Top salt 1,425 ft.; hole full salt water 1,760-1,800 ft.; show oil 3,065 ft.; hole full sulphur water 3,500-55 ft.; drlg. 3,600 ft.
Vitek Oil Co.'s No. 1 H. R. Clay	Shut down 1,497 ft.
HUDSPETH COUNTY	
American Land Co.'s (was Lockhart Bros.') No. 1 Gardner & Moseley, C SE Sec. 5, School Blk. 31	Shut down 262 ft.
Western States Oil Co.'s (was Lockhart & Co.'s) No. 1 Moore, C SE Sec. 16, Blk. 71, T. & P. Sur., T-5	Drlg. 450 ft.
Western States Oil Co.'s No. 1 Gardner & Mosley, Sec. 12, Blk. 18	Rigged up and shut down.
IRION COUNTY	
Cash Dollar et al's No. 1 G. J. Bird, NE Sec. 16, Blk. 10, S. P. R. R. Sur.	Shut down 2,500 ft.
F. E. Webb et al's No. 1 J. M. Nutt	Rigging up machine.
JEFF DAVIS COUNTY	
J. K. Hughes Dev. Co.'s No. 2 Means	Drlg. 2,000 ft.
Humble O. & R. Co.'s No. 2 Crecencio Flores, 1,130 ft. N and 850 ft. E of SW cor. Sec. 34, Blk. 55, T. & P. Sur., Twp. 8	Drlg. 2,400 ft.
JONES COUNTY	
Midwest Expl. Co.'s (was Campbell et al's) No. 1 L. H. Herndon, Sec. 6, M. E. P. & P. Sur., elev. 1,332 ft.	Total depth 3,009 ft.; will shoot showings at 2,485-89 ft. and 2,558-61 ft.
Garland & Diamond's No. 1 E. D. Glynn, SE cor. Sec. 18, Deaf & Dumb Asylum Lands	Shut down 2,430 ft.
Gibson & Johnson's No. 1 R. J. Camp, S. M. Hale Sur.	Drlg. 1,590 ft.
Hutson & Weaver's No. 1-A Smith	Total depth 1,980 ft. (cor.); shut down for casing.
Phillips Pet. Co.'s No. 2 J. C. Mason	Total depth 2,335 ft.; underream. 8-in.
W. G. Stough et al's No. 1 W. C. Bennett, Sec. 42, Orphan Asylum Sur.	Shut down 800 ft.
W. G. Stough and others' No. 1 J. P. Willis, J. C. Patterson Sur. No. 2	Shut down 1,740 ft.
Stebbins Oil Co.'s No. 2 Higgs, SE cor. Sec. 30, W. T. Scott Sur.	Location.
Stebbins Oil and Sinclair O. & G. Co.'s No. 1 Scott	Total depth 1,945 ft.; underreaming.
Swensondale Oil Co.'s No. 1 Caton, SW NW Sec. 9, Deaf & Dumb Asylum Lands	Total depth 3,020 ft.; show oil 3,008-13 ft.; shot 80 qts.; bridged; cleaning out.
KNOX COUNTY	
Deep Rock Oil Co.'s No. 1 Moore	Drlg. 500 ft.
Deep Rock Oil Co.'s No. 1 Big Four, 1,270 ft. S and 2,590 ft. W of NE cor. Sec. 31, Blk. 4	Total depth 2,455 ft.; shut down.
LOVING COUNTY	
Lockhart Bros.' No. 1 fee, Sec. 85, Blk. 33, H. & T. C. Sur.	Location.
Owens & Sloan's No. 1 W. D. Johnson, C SE Sec. 20, Blk. 53, T-3, T. & P. Sur., elev. 2,924 ft.	Shut down 1,020 ft.; in litigation.
LYNN COUNTY	
Elpo Oil Co.'s No. 1 Nevols, NW cor. Sec. 6, Blk. C-42, School Lands	Shut down 630 ft.
MIDLAND COUNTY	
Orbit Oil Co.'s No. 1 Moreland, C SE Sec. 17, Blk. 39, T. & P. Sur., T-1-S	Shut down 185 ft.
MITCHELL COUNTY	
Paul Teas et al's No. 1 A. C. Mills, NW cor. C. A. O'Keefe Sub. 11, J. P. Smith Sur.	Location.
Robert Thraves' No. 1 C. Way, Sec. 91, Blk. 27, T. & P. Sur., T-1-N	Total depth 2,508 ft.; shut down.
NOLAN COUNTY	
Herbert Oil Co.'s (was McClesky and others') No. 1 Pepper, SE cor. SW Sec. 29, Blk. 22, T. & P. Sur.	Rigged up and shut down.
Winemiller Corp.'s (was Reiter-Foster Oil Co.'s) No. 1 T. E. Arledge, Sec. 217, Blk. 1, H. & T. C. Sur.	Rigging cable tools.
Zweifel and others' No. 1 Longbotham, C SE Sec. 180, Blk. 1, H. & G. N. Sur.	Shut down 3,575 ft.
PECOS COUNTY	
George Anderson's No. 1 Sherbine Bros.	Rig on ground.
Cummings et al's No. 1 Blackstone & Slaughter	Drlg. 1,020 ft.
M. C. Dibble & Hale's No. 1 Bonebrake, Sec. 115, Blk. 8, H. & G. W. Sur., elev. 2,555 ft.	Shut down 640 ft.
Garland & Mott's No. 1 El Paso Cattle Loan Co., C NE Sec. 36, Blk. 136, T. & S. L. Sur., elev. 3,267 ft.	Hole full sulphur water 2,560 ft.; Total depth 3,501 ft.; plug. back.
Gibson Oil Corp.'s No. 1 R. R. Russell	Rig.
George A. Henshaw et al's No. 1 B. T. Corder, C SW Sec. 74, Blk. 2, C. C. S. D. Sur.	Location.
George A. Henshaw, Jr., No. 1 Schimmel, Sec. 29, Blk. 144, T. & St. L. Sur., elev. 2,780 ft.	Drlg. 1,215 ft.
Kirby Pet. Co. and Roxana's No. 1 W. W. Turney, NW cor. SW Sec. 11, Blk. 140, T. & St. L. Sur.	Hole full sulphur water 975-83 ft.; shut down 1,189 ft.
Mid-Kansas O. & G. Co.'s No. 1 Pryor & Wilson, NW cor. Sec. 3, Blk. 5, T. C. R. R. Sur.	Moving in machine.
Moody Oil Corp.'s No. 1 B. T. Corder, C SW Sec. 77, Blk. 2, C. C. S. D. Sur.	Rig.
Ocean Pet. Co.'s No. 1 G. N. Harral, C SW Sec. 82, Blk. R-2, G. C. & S. F. Sur., elev. 3,005 ft.	Shut down 2,903 ft.
Quinby Oil Co.'s No. 1 Townsite, Sec. 1, Blk. 267, Client Addn. Sur. Fort Stockton, elev. 2,980 ft.	Shut down 3,440 ft.
Quinby Oil Co.'s No. 2 Bennet, C NW 592, Blk. 195, G. C. & S. F. Sur., elev. 2,560 ft.	Shut down 1,457 ft.

(Continued on Page 138)

Winkler County Finds Two Gushers

Hendrick Pool's Big Wells Divert Spotlight From Pecos County Where Yates Pool Was Extended to Northwest

By C. D. Lockwood
Staff Correspondent, North and West Texas

FORT WORTH, Tex., Nov. 21.—A 980-bbl.-an-hour gusher in the Hendrick Pool of Winkler County, followed by another well within half a mile of it good for 7,677 bbls. a day, diverted the spotlight part of the time this week from Pecos County where the Yates Pool was extended a mile or so to the northwest and several producers, both new and old, performed sensationally.

Outside of these two pools the past week failed to bring forth anything of startling interest. Fuhrman and others' No. 1 Clark, in Crockett County, located between the Yates Pool and the Upton County production, encountered water instead of oil at the horizon where the latter was expected, while northwest of it, in Upton County, The Texas Company and Cordova Union Land Co. may have extended production south of the Humble Oil & Refining Co.'s Ricker & Dodson tract, near the Crane County line.

West Texas production for the week registered a gain of 7,086 bbls., which put it back close to the peak made during the week ended October 29, when the district averaged 218,986 bbls. daily. Thirty-seven new producing wells have been added to the list in the meantime, the total now being 1,098 wells and the average daily output 216,918 bbls. This is a per well average of 197 bbls. for the whole territory. It is interesting to note that the Church-Fields-McElroy Pool, with 206 producing wells still has an average of 537 bbls. to the well. Due to proration restrictions, the Yates Pool average is only 751 bbls., while the Hendrick Pool of Winkler County is highest with 827 bbls.

Winkler's Greatest Well

Winkler County's greatest well is Roxana Petroleum Corp.'s No. 1 Hendricks-C, in the NE cor. N half NW, Section 29, Block B-5. It is almost exactly half way between the discovery and the Southern Crude and Westbrook's No. 1 Hendrick-T-88-B, which made more than 7,000 bbls. initially and is still holding up above 5,000 bbls. daily. Roxana's No. 1-C topped the first pay at 2,692-95 feet where it had 1,300 feet of oil in the hole. At 2,885 feet it encountered the big pay which put 980 bbls. into the flow tanks in one hour. The well was then pinched in, and the oil is being run to Roxana's 80,000-bbl. tank in the SE of Section 40, about 1½ miles northeast of the well.

The other big Winkler County producer is Independent Oil & Gas Co.'s No. 1 Ida Hendrick, in the NW cor. W half SW, Section 34, Block B-5, a south offset to Gulf Production Co.'s No. 4 Hendrick which came in a couple of weeks ago at the rate of 250 bbls. an hour. The Independent producer seems to be the better well as it flowed at the rate of 330 bbls. hourly at 2,878-79 feet and actually tanked 7,677 bbls. in one day. After flowing a similar amount the second day this well had to be pinched down to 1,000 bbls. daily because the Independent has only one 55,000-bbl. tank completed and the other one which is under construction would not be ready to take care of the oil before the first one was full, at the rate it was going.

The west offset to the big Independent oil well is Southern Crude's No. 1 Hendrick T-67-F. It topped the pay at 2,920 feet and started flowing steadily at 2,972 feet, making 155 bbls. in 14 hours early last week. It flowed 1,715 bbls. at 2,980 feet and then the tools were lost in the hole. These wells are just 660 feet apart but the structural dip is to the west and that accounts for the difference of 100 feet in pay depth, although the surface elevations are practically the same.

Improved by Deepening

Cranfill & Reynolds' No. 1 Ida Hendricks-A, located near the NW cor. of Section 28, Block B-5, came in last month for 10,000 bbls. daily and gradually dropped off to approximately 4,000 bbls. a day. It was deepened last week 4 feet to a total depth of 2,887 feet and the output jumped back to 6,006 bbls. last Wednesday. It may be deepened further this week.

The diagonal northwest offset to it, Turman & Maxwell's No. 1 Ida Hendrick, located in the NE cor. of Section 29, topped a pay at 2,879 feet and was shut down for storage or pipe line connection. It is spraying 200 bbls. of oil with 5,000,000 feet of gas.

Half a mile north of these wells, Murchison Oil Co. and Cranfill Brothers' No. 1 Hendrick, in Section 35, went dead and is being deepened. It was completed in September for about 1,900 bbls. at 2,633-55 feet and at latest report was shut down for fuel at 2,707 feet. The producing formation in this field gives every indication of being highly erratic and almost anything can be expected to happen. Another instance of this is the north offset to Turman & Maxwell's producer, previously mentioned. The offset is Murchison and others' No. 1 Grisham-Hunter-B and is now standardizing at 2,890 feet with no showing of gas or oil as yet.

A couple of wells which failed to encounter production at the expected levels and were drilled down to the water line are now making a little oil. Southern Crude's No. 1 Hendrick 3-T-67-A, in Section 4, Block 12, the eastern offset to its big No. 1-B, has been shut down for about three weeks at total depth of 3,050 feet, to which point it was plugged back from 3,072 feet where it had water. They were afraid to shoot this well because it might injure the big producer 660 feet west of it. Now it is flowing about 5 bbls. daily.

The other one is Landreth and Roxana's No. 1 Hendrick-A, in the SE cor. SW of Section 29, Block B-5. It encountered a little sulphur water at 3,009-13 feet but the water was soon exhausted and the hole was filled up to 2,950 feet with gravel. This well is now making about 3 bailers of oil per hour.

Yates Pool

The Yates Pool was extended during the past week by Gulf Production Co.'s No. 3 Yates which flowed 60 bbls. an hour at total depth of 1,369 feet. It increased steadily to that amount from 1,305 feet. The oil tests 30.3 degrees gravity. This well is located 4,000 feet northwest of Roxana Petroleum Corp.'s No. 2 Tippett and gives the field a length of more than 5 miles in a northwest-southeast direction.

Humble Oil & Refining Co.'s No. 3 Smith, near the CNL of Section 36, Block 194, likewise extended the pool to the westward half a mile and is about a mile south of Roxana's No. 2 Tippett. It flowed 7,931 bbls. in 24 hours at 1,438 feet in pay topped at 1,365 feet.

Another big well on the Mid-Kansas and Transcontinental Oil Co.'s property is No. 9 Yates-B, an inside well just 2,000 feet northeast of the big No. 2 Yates-C. This producer topped the pay at 974 feet and flowed 55 bbls. an hour while drilling at 1,048 feet. Last Saturday it was shut down at 1,080 feet and flowed 2,346 bbls. in five hours through one 4-inch line. It was then shut in for the remaining 19 hours. This is at the rate of approximately 470 bbls. an hour.

Mid-Kansas and Transcontinental's No. 3 Smith-Taylor, in Section 33, Block 194, a west offset to No. 7 Yates-A, flowed 320 bbls. an hour, flowing open, at 1,305-95 feet. Saturday it made 2,125 bbls. in 10 hours through two 4-inch lines and was shut in the other 14 hours.

On the southwestern edge of the field, Red Bank Oil Co.'s No. 2 Smith, in Section 24, Block 194, located 660 feet south of No. 1, topped the pay at 1,555 feet and at 1,575 feet had 300 feet of oil in the hole.

Wells Making Water

The wells on the east side of the field which made water gauged as follows Saturday: Marland Oil Co.'s No. 1 Yates-A, 240 bbls. net oil, 62 per cent water; No. 2-A, 360 bbls. net oil, 2½ per cent water; No. 3-A, shut in; No. 4-A, 885 bbls. net oil, no water. Gulf Production Co.'s No. 1 Thompson, shut in; No. 2 Thompson, 435 bbls. net oil, 12 per cent water. Smallwood & Dunn's (formerly Allsman & Bell's) No. 1 River Bed, 12 per cent water; No. 3, 65 per cent water. These wells were not gauged separately for oil production but together made 880 bbls. of fluid.

About three-quarters of a mile west of Gulf Production Co.'s No. 3 Yates, in the northwestern extension of the area, Kirby Oil Co. and Edson's No. 1 Tippett looks like an almost sure bet for production. It topped the lime at 1,268 feet, or 1,279 feet above sea level, 46 feet lower than Gulf's No. 3 Yates. The water line is about plus 1,250 feet, although this is not a fixed and certain level. But anything above plus 1,250 feet on top of the lime is regarded favorably.

In Crockett County, northwest of the Yates Pool, Fuhrman and others' (formerly Newman's) No. 1 Clark, in Section 1, Block B, G. C. & S. F. Survey, 1,650 feet from the north line and 2,310 feet from the west line, encountered sulphur water at 2,106 feet. The elevation of this test is 2,703 feet, top of salt 640 feet, and top of lime 1,930 feet. It is about 20 feet higher on the lime than Simms Oil Co.'s No. 1 Clark, 2½ miles north of it in Upton County, but it should be at least that much higher due to regional dip. The Fuhrman well had an oil showing at 2,055 feet. It logged bentonite at 2,012-20 feet.

Another Crockett County failure was Eppenauer's No. 1 Noelke, 660 feet from the south line and 330 feet from west line of Section 30, Block GG, G. C. & S. F. Survey. It was abandoned at 2,000 feet. Surface elevation is 2,323 feet.

In Pecos County, G. A. Henshaw's No. 1 Sweat & Hinyard, in the C SW, Section 29, Block 144, T. & St. L. Survey, encountered sulphur water at 1,275-80 feet and was drilling ahead at 1,282 feet. The elevation is 2,780 feet.

Upton County

In Upton County, The Texas Company and Cordova Union Land Co.'s No. 1 Union Land, in Section 23, Block 35, H. & T. C. Survey, south of the Humble Oil & Refining Co.'s production on the Ricker land, swabbed 60 bbls. the other day, an accumulation of several days.

Southern Crude Oil Purchasing Co. has not curtailed its tank car shipments out of West Texas as a result of cutting off all connections except its own and those companies with whom it has contracts. Southern's tank car shipments last week from all West Texas pools where it has connections averaged 22,000 bbls. daily. Roxana Petroleum Corp., the only other large shipper by tank car, averaged 2,200 bbls. daily. Southern Crude's shipments may be increased the latter part of this month, too.

Winkler County Tankage

Large steel under construction or built in the Hendrick Pool of Winkler County totals 2,203,000 bbls., exclusive of the tanks at Wickett on the T. & P. Railroad in Ward County. These tanks are owned as follows:

American Petroleum Co.	2	80,000
American Petroleum Co.	4	55,000
Gulf Production Co.	2	80,000
Atlantic Oil Producing Co.	2	80,000
Atlantic Oil Producing Co.	2	55,000
Murchison	1	80,000
Roxana Petroleum Corp.	2	80,000
Cranfill & Reynolds	1	80,000
Humble Oil & Refining Co.	2	64,500
Southern Crude	4	55,000
Independent Oil & Gas Co.	1	55,000
Pure Oil Co.	1	55,000
Landreth & Roxana	3	80,000
Magnolia Petroleum Co.	6	55,000

Menard County, just east of McCulloch County, has an interesting well. It is Carpenter & Robbins' No. 1 Kothman, in the NW cor. SW of Section 22, B. S. & F. Survey. It found an oil sand at 414-15 feet which put 165 feet of 34.6 gravity crude in the hole. The well has been shut in and the machine moved away from the location.

Wichita Falls District

The opening of a new sand in the Morrison Pool of Young County, the extension of the Turbeville Pool of Archer County and the addition of another deep producer to the South Bend Pool of Young County marked the past week in the Wichita Falls district.

Pitzer & West's No. 4 Morrison, 600 feet from the south line and 200 feet from the west line of the B. Hammond Survey in the heart of the Morrison Pool, is the discovery well of the new pay horizon, which was encountered at 1,768-70 feet and estimated good for 100 bbls. It may be deepened a little before completion, however.

In the same pool, Nash & Windfohr's No. 1 Hinson, in the Paul Pier Survey, made 200 bbls. at 2,199-2,206 feet. This well is on the lease formerly held by Gulf Production Co. Nash & Windfohr paid the Gulf $10,000 and a one-eighth overriding royalty for it.

Mudd & Wisam and others purchased the Coones & Hotchkiss properties in the Morrison Pool, paying $125,000 cash and $200,000 in oil. These leases are now making about 200 bbls. daily. The deal includes a one-eighth overriding royalty in the Pitzer & West lease in the Eli Sherrell Survey.

Panhandle Refining Co.'s No. 7 McCluskey in the South Bend Pool of Young County flowed 450 bbls. at 4,165-4,241 feet. Same company's No. 7 McCluskey, the wonder well, was still flowing 2,750 bbls. daily this week.

WEST TEXAS COMPLETIONS

Crockett County

Eppeneaur's No. 1 Noelke was abandoned at 2,000 feet.

Pecos County

George Anderson's No. 1 McKenzie was dry and abandoned at 2,596 feet. McMan & Marland's No. 7 Yates was completed at 1,250-1,310 feet for 626 bbls. an hour flowing through three 4-inch lines. Mid-Kansas Oil & Gas Co. and Transcontinental Oil Co.'s No. 1 M. A. Smith was plugged and abandnoed at 1,565 feet. W. R. Shankel and others' No. 1 Yates was dry and abandoned at 1,479 feet.

Reagan County

Big Lake Oil Co.'s No. 134 University made 45 bbls. at 2,931-35 feet.

Upton County

Eastland Oil Co. and Brandon & McCamey's No. 1 Union Land Co. was plugged and abandoned at 2,222 feet. It made 5 bbls. of oil daily at 2,125-78 feet, but encountered sulphur from 2,178 to 2,222 feet. Champlin Oil & Refining Co.'s No. 2 Lane swabbed 680 bbls. of fluid,

25 per cent water, from pay at 1,997-2,028 feet, but was not completed.

WICHITA FALLS DISTRICT COMPLETIONS

Archer County

Hines and others' No. 1 Whittaker was abandoned as dry at 1,604 feet. So was Johnson and others' No. 1 Ward at 1,364 feet. Long and others' No. 2 Hudson pumped 8 bbls. at 1,160-68 feet. Same interests' No. 1 Marsh was a dry hole at 1,456 feet.

Menke's No. 1 Bearden was plugged at 1,103 feet. Shappell Oil Co. abandoned No. 10 Wilson-B at 1,619 feet.

Arco Oil Co.'s No. 3 Maddox-B made 45 bbls. initial at 916-32 feet. Continental Oil Co.'s No. 1 Edmondson was good for 33 bbls. of oil and 32 bbls. of salt water initial and later pumped 11 bbls. of oil and 35 bbls. of salt water. It had broken sand at 1,316-26 feet and oil sand 1,326-32 feet. Same company's No. 23 Maddox-A made 32 bbls. at 917-20 feet.

Baylor County

Mel Richards' No. 2 Young was dry and abandoned at 1,450 feet.

Cooke County

Continental Oil Co.'s No. 2 Koelzer made 20 bbls. of oil and 5 bbls. of water at 1,369-84 feet, total depth 1,390 feet.

Grayson County

Simpson-Fell Oil Corp.'s No. 1 Wall was completed for 2,000,000 feet of gas, 100 pounds rock pressure after plugging back to 1,294 feet. It had gas sands at 849-50, 887-88, 919-21, 1,160-62 and 1,191-94 feet.

Jack County

Bland & Strang's No. 2 Roach made 8 bbls. at 475-87 feet. Buttram Petroleum Co.'s No. 4 Jones made 117 bbls. at 1,999-2,008 feet. Chandler and others' No. 2 Coats was a duster at 605 feet. So was Connell & Wixon's No. 1 Sloan at 548 feet. Craig, Lowrie & Walton's No. 4 Coats made 15 bbls. from sand at 484-500 feet after plugging back from 505 feet. Madden & Hunt's No. 4 Sloan was a dry hole at 572 feet. And Smith & Adams' No. 1 Leach was likewise dry at 710 feet.

Knox County

Deep Rock Oil Co.'s No. 1 Beavers was a dry hole at 3,500 feet.

Wichita County

John O'Neil's No. 2 Kemp & Kempner was abandoned as dry at 1,853 feet. Stidham & Thrasher's No. 1 N. H. Martin was also a duster at 1,907 feet. The Texas Company's No. 335 Waggoner made 32 bbls. at 1,942-44 feet.

Wilbarger County

Consolidated Oil Co. and J. S. Cosden's No. 1 Waggoner-C was plugged and abandoned at 2,425 feet. The Milham Corp. of Texas' No. 12 Waggoner-B pumped 5 bbls. after shots of 40 and 20 quarts at 2,547-74 feet. Total depth was 2,597 feet, plugged back to 2,574 feet. Waggoner Refining Co.'s No. 3 Waggoner-C pumped 20 bbls. at total depth of 2,412 feet. It had saturated lime from 2,280-97 feet, a small showing of oil at 2,332-40 feet and oil sand 2,340-50 feet.

Young County

At'antic Oil Producing Co. and Rose's No. 1 Mathes was dry and abandoned at 1,303 feet. Parker and others' No. 1 Oliver was also dry at 600 feet. United Producers & Petroleum Producers Co.'s No. 1 Shearer was dry and plugged at 948 feet.

Nash & Windfohr's No. 1 Hinson flowed 467 bb's., 3 per cent water, from sand at 2,199-2,207 feet. Painter and others' No. 1 Donnell was estimated good for 8 bbls. after a 50-quart shot at 3,802-20 feet. Total depth was 4,202 feet, plugged back to 3,822 feet.

Panhandle Refining Co.'s No. 21 McCluskey flowed 600 bbls. from lime pay at 4,165 to 4,241 feet.

Simms Oil Co.'s No. 1 Ribble is to be abandoned at 4,358 feet. Westerfelt & Noble's No. 1 Graham-B flowed 250 bbls. from sand at 3,334-35 feet.

RANGER DISTRICT COMPLETIONS

Brown County

Cranfill & Reynolds' No. 14 Smith made 50 bbls. at 1,341-60 feet. Harper and others' No. 1 George was dry and abandoned at 1,700 feet. Humble Oil & Refining Co.'s No. 13 Armstrong made 45 bbls. at 1,201-23 feet; No. 8 Gilbreath flowed 239 bbls. the first 24 hours at 1,310-24 feet and will be deepened. Selby Oil Co.'s No. 21 Ellis was good for 15 bbls. at 1,318-27 feet.

Goldenrod Oil Co.'s No. 2 King was abandoned as dry at 1,535 feet. Lake Petroleum Co.'s No. 1 Coggin estate was temporarily abandoned at 270 feet. Massey's No. 1 Stewart made 6 bbls. after a shot of 20 quarts at 1,000-20 feet and another of 80 quarts at 998-1,024 feet. It had water sand from 1,042 to 1,048 feet. Van Bibber & Lehman's No. 2 Evans was abandoned as dry at 709 feet. Warren Development Co.'s No. 2 Looper was dry and plugged at 822 feet.

Callahan County

Garner's No. 1 Hickman was plugged and abandoned at 1,041 feet. Gibson & Johnson's No. 3-8 Snyder was also dry at 1,105 feet. Goodlee & Duffy's No. 1 Alvord made 2,000,000 feet of gas at 987-1,003 feet, total depth 1,006 feet.

Prairie Oil & Gas Co.'s No. 3 Webb swabbed 40 bbls. in 15 hours from sand at 1,630-35 feet.

Reed & Grace's No. 1 Hood was a duster at 812 feet; No. 2 was also dry at 450 feet. Shaw and others' No. 8 Miller made 20 bbls. at 1,607-36 feet and 1,638-47 feet.

Coleman County

Tower & McKanna's No. 1 Hazzard was abandoned at 2,175 feet. It had dry sand at 2,160-70 feet and water sand from 2,170-75 feet. Ingleright and others' No. 1 McClure was dry and plugged at 1,617 feet.

Palo Pinto County

Dixie Drilling Co.'s No. 1 Seaman was abandoned as dry at 4,274 feet.

Comanche County

Hoffer Oil Corp.'s No. 1 Rasco was plugged and abandoned at 3,152 feet after shots of 120 and 180 quarts had failed to produce results.

Eastland County

Texas Pacific Coal & Oil Co.'s No. 1 Dillon was dry and abandoned at 3,667 feet.

Stephens County

Gardner Brothers & Collins' No. 3 Cunningham made 50 bbls. at 3,202 feet. Republic Production Co.'s No. 7 Knox was dry and plugged at 4,685 feet. Texas Pacific Coal & Oil Co.'s No. 5 Pierce made 3,500,000 feet of gas at 1,525-52 feet.

Shackelford County

Earl & Dull's No. 2 Matthews was temporarily abandoned. Humble Oil & Refining Co.'s No. 3 Davis was dry and plugged at 2,042 feet. Texas Unity Oil Co.'s No. 2 Russ-Webb had sand at 970-76 feet and made 12 bbls. after a 10-quart shot.

NORTH CENTRAL TEXAS AND WEST TEXAS

Estimated Daily Production for the Week Ending November 19, 1927

Ranger District—	Prod.
Brown County	19,495
Callahan County	3,990
Coleman County	1,145
Comanche County	1,480
Palo Pinto County	460
Ranger	9,210
Shackelford County	5,030
Stephens County	8,855
Total Ranger district	49,665
Increase	1,180
Wichita Falls District—	
Archer County	22,650
Baylor County	85
Clay County	545
Cooke County	5,295
Jack County	1,040
Montague County	9,880
Throckmorton County	1,275
Wichita County	28,060
Wilbarger County	10,580
Young County	13,120
Total Wichita Falls district	92,530
Decrease	95
Total North Central Texas	142,195
Increase	1,085
West Texas District—	
Big Lake Field	22,726
Crane County	111,788
Crockett County	2,183
Ector County	12
Glasscock County	S. D.
Howard County	4,466
Jones County	1,332
Loving County	77
Mitchell County	3,432
Pecos County	36,063
Runnels County	166
Scurry County	48
Upton County	18,155
Winkler County	16,539
Total West Texas district	216,918
Increase	7,086
Grand total North and West Texas	359,113
Increase	8,171

WEST TEXAS

Daily Average Estimated Production for Week Ending November 19, 1927

Crane County

(Church-Fields-McElroy Pool)

Company, Lease—	Wells	Bbls.
Church et al:		
University	1	113
Church & Weekley:		
University	3	1,588
Church & Fields:		
Duoll-University	1	153
Eastland Oil & Collett:		
University	8	9,027
Gulf Prod. Co.:		
All leases	63	21,518
Humble O. & R. Co.:		
University	12	6,406
Independent O. & G. Co.:		
University-A	2	Off
University-B	1	*14
Landreth Prod. Corp.:		
Cowden-Anderson	16	13,389
Magnolia Pet. Co.:		
University-Hardwicke	10	4,072
University-O'Keefe	11	1,631
State-Lasseter	3	44
Magnolia Pet. Co. et al:		
University	4	10
Totals, Magnolia	28	5,757
Pecos Oil Co.:		
University	11	4,197
Prairie O. & G. Co.:		
University	6	*60
State-Lasseter	4	*8,031
Totals, Prairie	10	8,091
Simms & Atlantic:		
University-A	9	4,385
University-B	1	60
University-C	8	20,199
University-D	8	4,280
University-E	1	254
Totals, Simms & Atlantic	27	29,176
Stidham & Thrasher:		
University	1	10
The Texas Company:		
University	1	225
University-Beasley	1	35
Totals, The Texas Company	2	260
Tidal Oil Co. et al:		
University-B	2	61
University-C	1	38
University-E	1	84
University-F	7	*4,758
University-G	2	*435
University-H	2	41
University-I	6	*5,571
Totals, Tidal et al	20	10,988
Totals, Church-Fields-McElroy Pool	206	110,682
Average per well		537

Miscellaneous, Crane County

Gulf Prod. Co.:		
Waddell	1	31
Independent O. & G. Co.:		
Hughes	1	5
McMan O. & G. Co.:		
Hughes	2	72
Marland Oil Co.:		
All leases	16	768
The Texas Company:		
King	9	230
Union Land-F	1	0
Miscellaneous totals	30	1,106
Grand totals, Crane County	236	111,788
Average per well		473

Crockett County

Cromwell et al:		
Powell	3	125
Cushing Ref. & Gaso. Co.:		
Powell	2	264
Gulf Prod. Co.:		
Powell & Thompson	7	352
J. K. Hughes Dev. Co.:		
Powell	5	225
Humble & Marland:		
Powell	9	295
Powell-B	3	490
Sorg	1	0
Republic Prod. Co.:		
Powell	2	130
Roxana Pet. Corp.:		
Powell	1	14
Taylor-Link and Kirby:		
Powell	1	288
Totals, Crockett County	34	2,183
Average per well		64

Ector County

The Texas Company & J. S. Cosden:		
Connell-A	1	12

Glasscock County

Texon & Marland:		
Settles	2	*

Howard County

Bristow & Merrick:		
A. J. Hooks	3	110
Comet Pet. Co.:		
H. R. Clay	2	24
Dixie Oil Co.:		
H. R. Clay	1	10
F. H. E. Oil Co.:		
John Roberts	1	75
Godley Oil Co.:		
A. J. Hooks	1	85
Gulf Prod. Co.:		
Chalk	1	9
Harrison et al:		
Dora Roberts	2	50
Humble O. & R. Co.:		
Douthit	2	35
Lockhart & Co.:		
Chalk & Scott	7	90
Magnolia Pet. Co.:		
All leases	36	2,110
Marland Oil Co.:		
All leases	32	1,088
Marland & Texon:		
Settles-A	1	75
Marland & Group 1 Oil:		
Harding	1	28
Midwest Expl. Co.:		
H. R. Clay	2	54
Owens & Sloan:		
John Roberts	1	35

(Continued on Page 141)

Late News from the Fields

OKLAHOMA

The Greater Seminole area produced 430,656 bbls. from 1,007 wells on Tuesday of this week. The production by pools was:

Pool—	Wells	Prod.
Little River	73	40,096
Bowlegs	280	130,400
Earlsboro	270	174,178
Seminole	321	59,342
Searight	63	26,640
Totals	1,007	430,656

The important wildcat well of Snowden & McSweeney, No. 1 Tiger, NW cor. NW Section 13-7-6, which has been so closely watched, has a good showing of oil in what is thought to be the Simpson formation touched from 4,255-64 feet. The well is shut down for orders.

The Mid-Continent Petroleum Corp.'s No. 1 Harjo, SW cor. NE NE Section 18-14-10, in the Hall-Donnelly area of Creek County, had a good showing in the Dutcher sand from 2,830-32 feet, where the well made a flow of 30 bbls. every one and one-half hours. It will be deepened to the Wilcox sand, which was recently found in this area.

NORTH LOUISIANA

SHREVEPORT, La., Nov. 21.—Proven area of the Richland Parish gas field was extended 6 miles northeast of the nearest producer when Woodley Petroleum Co. and Triangle Drilling Co. completed No. 1 Hemler in Section 31-18-7e, making 6,000,000 feet of gas with 7 feet of hard sand from 2,471-78 feet. Location is 4 miles north and 4 east of Louisiana Petroleum Co.'s No. 1 Binion and Sartor in Section 22-17-6e, which made 5,000,000 feet initial at total depth of 2,476 feet. Although at practically the same total depth the Woodley-Triangle well is figured lower structurally, and to be on an entirely different structure from the Louisiana Petroleum Co. well as the red beds, which figure as a marker on the latter and other wells in the older part of the field, were missing from the extension well, as were several other formations shown in the logs of previous Richland completions.

Dixie Oil Co.'s No. 89 Dillon, Section 14-21-15, Caddo Parish, brought in for the second time, appears to be the best producer yet developed in the 3,900-foot stratum of the Trinity horizon in Pine Island. It was estimated today at 960 bbls. with 3,000,000 to 5,000,000 feet of gas. Total depth 3,997 feet. Completed October 26 at 3,809 feet, it was a 400-bbl. producer with 2,000,000 feet of gas and was deepened 188 feet after development of better production in the new lower pay.

GULF COAST

HOUSTON, Tex., Nov. 22.—Associated Oil Co.'s No. 1 Boyles, Pierce Junction Field, Harris County, is flowing 1,800 bbls. daily of pipe line oil from a sand encountered at 4,433-47 feet. The well is on the north side of the dome. The oil tests 29.6 gravity. Harrison Oil Co.'s No. 1 Jones has uncovered a new producing level at North Dayton, Liberty County, pumping 50 bbls. daily from sand at 1,609-25 feet. Previous producing levels have been found around 600 to 900 feet and also around 4,200 feet.

EAST CENTRAL TEXAS

By Special Correspondent

MEXIA, Tex., Nov. 19.—Four completions, one an old well, but producing badly cut oil; one a salt water hole, the third an abandonment and the fourth a very deep dry hole, summed up the results in East Central Texas in the past week.

The Transcontinental Oil Co.'s No. 2 E. W. Lewis, in the Cedar Creek area, Limestone County, was abandoned after sand at 2,920-23 feet had tested salt water. The Why Not Oil Co.'s No. 1 Rhea, in the same area, started at 100 bbls. of fluid, on the pump, but the fliud was 45 per cent salt water and 10 per

(Continued on Page 140)

Dunn Sucker Rod Elevators
"Super-Safety" and "Simplicity" Types
The automatic action, positive locking under load, method of latching, and the quick and easy-handling features of both types of Dunn Safety Sucker Rod Elevators represent new and scientific developments for safety and speed in handling sucker rods.
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Swabs and Shots Help Maintain Output

Seminole Production Continues Around Previous Week's Average. Pontotoc County Pool Attracting Interest

By J. L. Dwyer
Staff Correspondent. Oklahoma Fields

The swabs had a busy time in Seminole last week, and with the exception of The Texas Company's No. 8 Wilmont, NW cor. SE NW, Section 10-9-5, in the Earlsboro district, the majority of completions were making their oil by this method of production.

Shooting was once more responsible for the upholding of the daily average around 422,000 bbls., and during the week 35 wells were shot with an increase in output of about 18,000 bbls. On Monday the field made 430,927 bbls. Shooting may be continued indefinitely in the field, excepting in Little River where the operators' committee and the umpire placed a ban on the torpedo wagon for a period of 30 days. It was decided after a conference that any shooting at Little River would have a bad effect, and hence the order which was made by the committee of Messrs. Cole, Pringle, Conry, Moody and Sidwell. The prevention of shooting at Little River should be felt, as many of the wells there have had a small initial which could be increased by the shots.

In spite of additional completions, the Little River Field has not yet touched the 50,000-bbl. mark, under present conditions there is some doubt as to whether it ever will. If the well in Section 5-7-7, east of the field should be thrown wide open, and the wells south of Little River which are now pinched in should be opened, there would be a substantial increase, but there is every indication that the present shutdown will be continued until after the first of next year, and by that time, much of the flush should be gone from the producing wells.

Greater Seminole seems destined to maintain the current rate of output at least until the shooting program is completed.

Allen Field Interesting

The Allen Field, in Pontotoc County, is increasing in interest, and the new well of the Louisiana Oil & Refining Co. which has extended production across the river adds new speculation as to whether this will continue the present trend, or start a new pool. The Louisiana's well is No. 1 Brown, NE cor. NE, Section 18-5-8, and had 35,000,000 feet of gas in sand 2,635-47 feet. The well started spraying 200 bbls. of oil daily. The comparatively shallow depth of the producing horizon at Allen 2,400 to 2,700 feet) renders this play profitable to those who have the best holdings. The cost of operations is limited. The Sinclair Pipe Line Co.'s new 6-inch line from the Wewoka Field is reported under way, and the White Oak Refining Co. is reported to be starting a line from its refinery which is practically in the field's back yard.

Interest in the coming Osage sale has been stimulated by the well of the Prairie Oil & Gas Co. and others, which was formerly the property of A. G. Oliphant and others. This well is No. 3, NE cor. NE, Section 20-27-6, and tapped the regular Burbank sand at 2,897 feet, penetrating it 43 feet. The initial output of the well was 155 bbls. hourly from 3 feet in the sand, and deeper drilling increased this figure to 200 bbls. per hour. The well has never been shot, and the majority of Burbank wells have made heavy responses to shooting.

There are two unleased tracts offsetting this well, and they have contributed to the lively interest which will be exhibited at the sale to be held in Pawhuska, December 12.

A deep operation is the Sinclair Oil & Gas Co.'s No. 1 Wilkinson, a wildcat venture in Garfield County, SW cor. NE, Section 2-20-5w, which is drilling at 6,-253 feet.

The daily pipe line movement of oil out of the greater Seminole Field averaged 364,125 bbls. for the week ending November 19. The quantity of oil sent out of the field by tank cars for the same period averaged 17,511 bbls. daily.

Late completions in Greater Seminole included; Barnsdall Oil Co.'s No. 4 N. Bruner, NE cor. NE, Section 10-9-5, which has 400 feet of oil and a show of water from sand 4,610-14 feet. This well found the Wilcox very deep. The Indian Territory Illuminating Oil Co.'s No. 4 Dungan, in Little River, had 2,-000 feet of oil from sand 4,502-04 feet.

Barnsdall Oil Co.'s No. 4 Wasutka, SW cor. NE, Section 12-9-5, swabbed 79 bbls. in 16 hours after a shot of 15 quarts in sand 4,396-4,408 feet. Carter Oil Co.'s No. 2 Burden, NE cor. SW, Section 23-8-6, had the Viola lime 4,-350-4,365 feet and swabbed 85 bbls.

The most interesting wildcat test in Oklahoma today is Snowden & McSweeney's No. 1 Tiger, NW cor. NW, Section 13-7-6, which topped the Viola lime at 4,213 feet and drilled this stratum at 4,339 feet. The well is being watched closely, as it is thought to be running rather high on the structure, and should it find oil, will open another pool. The owners are reported to have agreed to shut in the well should the Wilcox sand be found productive.

Seminole Production

Production of the Greater Seminole area for November 19, by companies and leases, follows:

Little River

Company and Farm—	Wells	Prod.
Amerada:		
Fore	1	920
Nitey	4	3,080
Blackwell:		
Nitey	7	5,439
Carter:		
Fish	1	770
Continental:		
Cosar	2	1,020
Gypsy:		
Campbell	2	990
Nungee	1	20
Potiey	1	1,263
Wadsworth	1	12
Harris	1	108
Indian Territory:		
Dungan	4	3,071
House, M. A.	1	1,183
House, W. F. "A"	1	65
House, W. E. "B"	3	2,034
Jackson	3	3,586
McCulla	3	1,205
Nitey	5	2,937
Phoebe "A"	2	818
Phoebe "B"	2	1,178
Reed	1	190
Soketheche	4	1,347
Mid-Continent:		
Smith	1	45
Wadsworth	7	3,575
Philmack:		
Davis	1	790
Prairie:		
Dungan	1	30
House	3	3,070
Roxana:		
Smith	1	20
Superior:		
Wadsworth	1	31
The Texas Company:		
Coker	3	875
Tidal:		
House	2	1,799
Johnson	1	85
Total	72	41,566

Bowlegs

Amerada:		
Rasco	8	3,950
Atlantic:		
Baker	4	1,200
Fleet	4	940
Grayson	2	1,471
Jones, C.	3	184
Atlantic & Denver:		
Jones, A.	2	382
Barnsdall:		
McNac	1	40
Murrow	4	1,591
Carter:		
Bowlegs	3	1,575
Burden	2	665
Harjoche	6	1,200
Hilly	2	1,640
Jones	3	5,345
McGeisey	1	0
Walker	2	0
Melisse	1	3,160
Wise	12	8,380
Empire:		
Lacy	6	860
Wise	2	1,442
Gypsy:		
Bowlegs	1	317
Bradley	1	107
Dosar	1	100
Brown	1	52
Cumsey	4	1,367
Grayson	4	3,210
Henderson	1	230
Jones	1	545
Walker	8	2,347
Wise	3	205
Independent-Marland:		
Coker	1	72
Indian Territory:		
Barnett	2	845
Billington	5	985
Bowlegs	11	1,444
Burden	1	0
Davis	4	3,195
Fay	6	4,723
Goforth	11	2,114
Hull	1	350
Livingston	11	6,010
Lizzie	2	1,329
Walker	8	1,285
Wilmont	4	1,671
Work	1	16
Youngblood	2	205
Magnolia:		
Davis	1	842
Hammond	2	0
Vanbuskirk		344
McColloch:		
Bowlegs	2	150
Mid-Continent:		
Baker	4	2,002
Bowlegs	1	265
Hutke	1	2
Smith	4	750
Minnehoma:		
Bowlegs	4	279
Prairie:		
Gahagan	4	1,085
Harber	7	3,885
Jones	2	3,130
Templeton	4	5,865
Whitney	4	135
Pure:		
Reed	15	6,954
Strothers "D"	3	1,542
Strothers "E"	1	5
Strothers "F"	2	631
Roxana & Houston:		
Taylor	6	1,803
Shaffer:		
Lacy	3	700
Sinclair:		
Bowlegs	1	105
Cumsey	2	5,200
Ellen	6	3,335
Harjo	3	1,570
Jones	5	6,075
Taylor	4	4,125
Walker	4	1,505
The Texas Company:		
Reed	9	6,665
Tidal:		
Grayson	3	1,[illegible]
Harjoche	6	2,530
Twin States:		
Jones	2	130
Total Bowlegs	280	130,311

Earlsboro

Amerada:		
Anderson	3	2,710
Cowden	8	1,945
Rodgers	2	775
Barnsdall:		
Brown		4,578
Bruner, F.	2	1,010
Bruner, N.	3	4,492
Cudjo, C.	1	29
Davis, D.	3	1,039
Davis, J.	3	3,709
Davis, M.	3	1,163
Gibson	7	4,053
Hearn	1	8
Ingram	7	9,394
Pack	4	571
Peter	4	375
Sango	1	0
Sebolka	1	1,549
Sullivan, H.	2	376
Sullivan, Harjo	3	61
Wasutke	4	742
Carter:		
Davis	1	1,475
Payne	3	1,455
Sango	3	8,125
Continental:		
Kaye	2	1,260
Spencer	4	2,830
Crosbie:		
Bryant	2	991
Empire:		
Barker	1	3,597
Edmundson	3	2,399
Gypsy:		
Bruner	4	7,002
Carter	9	7,647
Earl	1	0
Hunick	1	572
McFarland	1	0
Noble	4	7,95
Peter	2	1,180
Sango	3	1,280
State	4	780
Independent:		
Bruner	4	1,55[illegible]
Sullivan	4	77
Knapp	5	4,9[illegible]
Gaines	2	7,230
O'Dell	4	425
Interocean:		
Payne	1	20
Magnolia:		
Bryant	6	2,230
Cowden	4	16
Dixon	1	24
Edmundson	2	839
Holmsley	7	2,337
Ingram	1	44
Lena	3	316
Seay	5	1,681
Simpson	4	608
Sparks	7	4,201
Sullivan	2	1,673
Mid-Continent:		
McCumber	7	2,370
Mid-Kansas:		
Anderson	3	670
Phillips:		
Dunnaway	1	30
Graham	7	442
Prairie:		
Baker	1	0
Davis	4	1,77
Graham, C.	2	1,205
Graham, O.	4	3,830
Stidham	13	10,660
Shaffer:		
Clark	4	730
Roxana:		
Bayliss	1	17
Spencer	2	809
Sinclair:		
Foreman	1	15
Hollins	3	765
Sango	1	1,990
Skelly:		
Spencer	2	2,877
The Texas Company:		
Anderson	3	1,225
Brown	7	1,470
Rodgers	3	6,615
Wilmont	6	4,025
Tidal:		
Watkins	5	2,710
Twin State:		
Barker	4	175
Hearn	2	4,225
Total Earlsboro	265	163,228

Seminole

Carter:		
B. Carter	2	195
J. Carter	3	20
F. Carter	3	140
Creamer	2	42
R. Cudjo	4	450
W. Cudjo	2	5
Gilliland	2	365
Grisso, M.	1	0
Grisso, W.	6	1,050
Knapp	3	235
Killing, M.	12	8,560
Killing, G.	4	945
Lukes	7	1,750
Ponder	2	75
Simpson	3	123
Stro.her	4	625
Vierson	4	405
Jackson	1	0
Amerada:		
Fixico	4	1,104
Killing	4	445
Rentie	3	854
Atlantic:		
Cudjo, N.	3	635
Barnsdall:		
Carter	3	2,668
Henry	2	680
Jones	4	1,055
Empire:		
Gross	4	312
Wilson	2	344
Gypsy:		
Butler	3	600
Carter	8	775
Cudjo	5	435
Fixico	7	165
Harjo	3	1,065
Wolf	6	143
Independent:		
F. Fixico	3	305
Harjo	3	195
Independent & Garland:		
T. Fixico	3	997
Independent & Interocean:		
Jones	4	456
Indian Territory:		
Allen	2	323
Bowlegs	12	2,708
Fleet	1	0
Gooden	4	201
Harjo	4	430
James	4	26
Reed	3	27
Kingwood:		
Johnson	3	1,286
Magnolia:		
Born	1	63
Franks	4	732
Mid-Continent:		
Rentie	9	1,065
Tayeche	7	380
Mid-Kansas:		
Pressley	1	0
Wilkins	2	312
Phillips:		
Strothers	2	140
Philmack:		
Butler	3	1,310
Prairie:		
Gross	5	62
Mason	1	50
Spencer	1	15
Strother	8	701
Pure:		
Strother, A.	17	3,76[illegible]
Strother, B.	5	2,586
Strother, C.	1	82
Roxana:		
Harber	2	290
Lashley	2	38
Sinclair:		
Carter	2	30
Cudjo, A.	6	875
Cudjo, B.	4	1,190
Dicey	2	1,970
Fixico	4	870
Slick:		
Cudjo	3	730
Franks	8	1,404
Giblet, Sam	3	2,652
Tiger	1	56
Superior:		
Cudjo	4	902

"Overproduction today is injuring millions who have their wealth invested in oil properties; it is injuring the great producing and refining companies; it is depleting a natural resource which can never be replaced."

Extract from the speech of Hon. Hubert Work Secretary of the Interior and Chairman of the Federal Oil Conservation Board, before the Mineral Law Section, American Bar Association, at Buffalo, August 30, 1927

Universal Oil Products Company
Owner of the Dubbs Process
310 South Michigan Ave
Chicago, Illinois

The Texas Company:		
Mayhue	1	310
Strothers	2	65
Tidal:		
Carter	5	551
Fixico	8	602
Harjo, D.	1	735
Harjo, T.	6	230
Mahardy	2	214
Thyeche	2	13
Turman:		
Cudjo	4	1,125
Grisso	1	152
Jones	4	527
Total	324	60,017
Searight		
Carter:		
Davis	7	2,325
Frazie	6	3,925
Kiker	1	30
Mandler	2	50
Scott	1	30
Amerada:		
Johnson	1	85
Strother	2	2,397
Gypsy:		
Cudjo	3	1,010
Mid-Continent:		
Grayson	6	790
Soloche	3	1,775
Pine:		
Lulla	1	0
Prairie:		
Cannon	1	10
Carter	1	30
Houck	1	7
Kincaid	6	89
Wiemer	1	15
Pure:		
Aldridge	5	4,469
Roxana:		
Strother	2	1,392
Sinclair:		
Polly	4	2,770
Twin State:		
Varnum	2	917
Wilcox:		
Chupco	7	4,295
Total	62	26,411
Total Little River	72	41,566
Total Bowlegs	280	130,311
Total Earlsboro	265	163,228
Total Seminole	324	60,017
Total Searight	62	26,411
Grand total	1,003	421,533

Beckham County

Skelly Oil Co. made location for No. 1 Poarch, NE cor. NW NE Section 28-9-23w. Magnolia Petroleum Co.'s No. 2 Beagle, NW cor. Section 28-9-23w, has been shut in for 38,000,000 feet of gas in sand at 2,659-83 feet.

Carter County

Magnolia Petroleum Co. is building the rig for No. 2 J. C. Brooks, NW cor. NE Section 12-2s-3w. No. 1 Gabrial, NW cor. SW Section 23-1s-3w, was completed for 80 bbls. in a broken sand at 2,370-2,415 feet.

Creek County

Roxana Petroleum Corp.'s rig is up for No. 2 Clark, NE cor. SE NW Section 18-19-9. McCulloch Oil Co.'s No. 1 Burnett, NW cor. NE NE Section 22-18-11, an old well, is rigging to deepen. Kennedy & Horner and others' No. 2 Strip, SE cor. SW NW Section 24-18-11, is spudding. Wilcox Oil & Gas Co. has the rig up for No. 1 Kimble & Reading, SE cor. NW Section 18-14-10. The rig has been moved to the location for No. 5 Wolfe, SW cor. NE Section 18-14-10. The rig is on the ground for No. 4 Dixon, NW cor. SE Section 18-14-10.

Bu-Vi-Bar Petroleum Corp.'s No. 1 Benifeld, SE cor. Section 24-15-7, had sand from 3,390 feet to 3,394 feet and was plugged back to 3,391 feet and made 15 bbls. Continental Oil Co.'s No. 1-A, Unallotted, NE cor. Section 26-18-11, was completed for 100 bbls. in the Dutcher sand at 1,906-26 feet. C. G. Tibbens' No. 2 Jackson, NW cor. SE SW Section 4-18-12, is a gas well making 5,000,000 feet from the Wilcox sand at 2,090-93 feet. Kennedy & Horner and others' No. 2 Strip, SW cor. SE SE Section 13-17-10, is dry and abandoned at 2,520 feet being dry in the Dutcher sand. Ted-Ray Oil Co.'s No. 1 Littlehead, NE cor. SW NE Section 13-17-10, made 25 bbls. after a shot of 100 quarts in the Red Fork sand at 1,873-97 feet. McCready Oil Co.'s No. 1 Bruner, SW cor. NE SE Section 30-17-11, had the Red Fork sand at 1,795-1,805 feet and has been abandoned at 1,825 feet. Grayhoma Oil Co. and others' No. 1 Vaughn, NE cor. SW NE Section 32-16-9, was deepened to the Dutcher sand at 2,975-93 feet and abandoned. Producers & Refiners Corp.'s No. 4 Harjo, SW cor. SE NE Section 18-14-10, made 320 bbls. from the Wilcox sand at 3,427-59 feet. Wilcox Oil & Gas Co.'s No. 2 Dixon, SE cor. NW SE Section 18-14-10, was shot with five quarts in the Wilcox sand at 3,414-27 feet and made 125 bbls.

Grady County

Oklahoma Gas Utilities Co. has erected the rig for No. 2 Sanford, NE cor. SE SW Section 23-5-8w. Location has been made for No. 2 Heathley, NW cor. NE Section 2-4-8w. Harwell and others made location for No. 2 Pendley, C NE NW Section 14-4-8w. Marland Oil Co.'s No. 3 Burke, NW cor. SW Section 16-3-5w, Carter-Knox Pool, is now plugging back from 3,150 feet. Marland Oil Co. and Joe Ray's No. 3 Woods, NE cor. SE NE Section 17-3-5w, which is flowing 45 bbls. from sand at 2,272-80 feet, is drilling deeper at 2,310 feet.

Magnolia Petroleum Co.'s No. 3 Dryden, SW cor. NW SE Section 35-5-8w, is shut in for 33,000,000 feet of gas in sand 2,150-2,350 feet. E. P. Harwell's No. 1 Pendley, C NE NW Section 14-4-8w, was completed for 10,000,000 feet of gas in sand at 1,760-90 feet. Garvin Drilling Co.'s No. 1 W. Homer, SE cor. NE Section 18-4-6w, has been abandoned at 2,325 feet. Carter Oil Co.'s No. 8 Walford, SW cor. SE SW Section 16-3-5w, Carter-Knox Pool, came in for 170 bbls. from sand at 1,839-1,913 feet.

Jefferson County

Denton, Lash & McCall's No. 1 Trout, SE cor. NE SE Section 18-7s-5w, is making 20 bbls. from sand at 830-36 feet.

Kay County

Harris & Haun's No. 1-A Tickle, SE cor. Section 25-29-1w, is drilling at 200 feet. Nehr Oil Co. made location for No. 1 School Land No. 76, C NW SE Section 36-28-1w. Ivan Otstot and others' machine is moving in for No. 1 School Land No. 76, NW cor. NE SW Section 36-28-1w. Fred Morgan's No. 1 Elder, NW cor. SW Section 29-28-1, is drilling at 60 feet. Wentz Oil Corp. is moving the machine in for No. 1 Blackwell Country Club, SW cor. Section 20-27-1w. Larutan Gas & Fuel Co. is moving a machine in for No. 2 Rembe, NE cor. NW SW Section 29-27-1w, Blackwell Field. Barnsdall Oil Co. and Margay Oil Co.'s No. 1 Kirwan, NW cor. Section 2-25-2w, is a machine rigging up.

Harris & Haun's No. 1 Jameson, C SE NE Section 8-27-1w, Blackwell Field, is an old well deepened from 3,443 feet to 3,680 feet and plugged back to 3,447 feet where it made 2½ bbls. Marland Oil Co.'s No. 4 F. Gaylor, SE cor. SW Section 19-27-1w, was completed for 133,000 feet of gas in sand at 697-702 feet. Larutan Gas & Fuel Co.'s No. 1 Rembe, NW cor. Section 29-27-1w, gauged 1,000,000 feet of gas in sand at 701-06 feet. Gypsy Oil Co.'s No. 2 Chambers, SE cor. SW NE Section 9-25-2w, Thomas Pool extension, has been abandoned at 4,765 feet. No. 3 Chambers, SW cor. SE NE Section 9-25-2w, drilled to 4,415 feet, plugged back to 4,241 feet and made 46 bbls.

Lincoln County

Magnolia Petroleum Co.'s No. 1 Teleford, NW cor. SE Section 7-14-4, is a dry hole at 4,780 feet.

Garfield County

E. A. Summers' No. 1 Vanderwork, NE cor. NW Section 31-21-5w, has been abandoned at 1,665 feet.

Osage County

Winona Oil Co. made location for No. 2, NW cor. NE NE Section 18-29-11. Prairie Oil & Gas Co. and others are building the rig for No. 6, NE cor. SE NE Section 20-27-6, Burbank Pool. Indian Territory Illuminating Oil Co. made location for No. 387, SW cor. NE NE Section 17-27-11. Location also was made for No. 386, NW cor. NE NW Section 17-27-11. Kewanee Oil & Gas Co. has the cellar dug for No. 5, NE cor. SE NE Section 3-26-6, Burbank Pool. The cellar is also dug for No. 6, NW cor. SE NE Section 3-26-6. The rig has been moved out for No. 7, NE cor. SW NE Section 3-26-6. The cellar has been dug for No. 8, SE cor. NW NE Section 3-26-6. The location has been made for No. 9, SW cor. NE NE Section 3-26-6. Indian Territory Illuminating Oil Co.'s No. 384, NE cor. SW SE Section 20-25-12, is spudding. Location was staked for No. 385, NE cor. NW Section 29-23-8. C. B. Peters has the rig up for No. 1, CNL NE Section 21-23-9. Delmar Oil Co. has the rig up for No. 4, NE cor. SW SE Section 17-23-10. Pueblo Petroleum Co. staked the location for No. 4, CWL SW SE Section 14-21-8.

Verland Oil Co. made location for No. 8, NE cor. SW NE Section 17-21-12. Oklahoma Natural Gas Corp.'s No. 778, SE cor. SW SW Section 6-21-12, was completed for 1,000,000 feet of gas in the Bartlesville sand at 1,332-64 feet. Kewanee Oil & Gas Co.'s No. 2, SE cor. NE. Section 3-26-6, made 1,245 bbls. from the Burbank sand at 2,746-2,813 feet.

Logan County

Roxana Petroleum Corp. is moving the rig in for No. 1 McDaniels, NE cor. SW Section 16-18-4w, Lovel area. Healdton Oil & Gas Co.'s No. 1 Gragg, SW cor. Section 29-18-4w, is drilling at 1,450 feet.

Pawnee County

Shelts and others' No. 2 Walis, C NW NE Section 5-20-8, had sand at 2,470-2,513 feet and made 20 bbls. after the shot.

Pontotoc County

Sinclair Oil & Gas Co. has the rig material on the ground for No. 1 McDaniel, NE cor. Section 17-5-6. Shaffer Oil & Refining Co. has built the rig for No. 1-A Gilcrease, NW cor. NE Section 36-5-7. Louisiana Oil Refining Co.'s No. 6 Harjo, NE cor. SW SW Section 17-5-8, Allen Pool, is rigging up rotary tools. The rig is being built for No. 5 Warfle, SW cor. NE Section 20-5-8. Homaokla Oil Co.'s No. 2 Watson, SE cor. NE SW Section 33-5-8, is drilling at 1,560 feet.

American Oil & Refining Co.'s No. 1 Daniels, CNL SE Section 27-5-6, is dry and abandoned at 2,135 feet. Shaffer Oil & Refining Co.'s No. 1 Gilcrease, NW cor. NE Section 36-5-7, had a series of sands at 2,280-2,340 feet but lost the hole at 2,340 feet where the well made 400 bbls. The rig is being skidded for a new hole. Louisiana Oil Refining Co.'s No. 2 McElroy, SW cor. SE Section 17-5-8, flowed 1,000 bbls. the first 20 hours from sand at 2,447-74 feet, and is now producing 650 bbls. W. R. Ramsey's No. 2 Webb, NW cor. NE SW Section 20-5-8, was completed for 720 bbls. in sand at 2,460-2,527 feet.

Stephens County

Clark & Cowden have built the rig for No. 1 School Land, SE cor. NW SE Section 36-2-9w. Pearce & Brown's No. 1 Wilkinson "B," SW cor. SE Section 27-1s-8w, is to be drilled deeper from 1,648 feet. Magnolia Petroleum Corp. made location for No. 1 Bell-Savage, NE cor. SE NW Section 3-1s-4w. Pace and others' rig is up for No. 2 Fobb "C," SW cor. NW SE Section 12-2s-8w.

Magnolia Petroleum Co.'s No. 4 Morgan, NW cor. NE SE Section 32-1-8w, has been abandoned at 2,420 feet. Tom Medlin's No. 1-A Taliaferro, SE cor. SW SE SW, Section 27-1s-8w, was deepened from 1,412 feet to sand at 1,699-1,702 feet and is pumping 60 bbls. Magnolia Petroleum Co.'s No. 1-A Howey, SE cor. Section 15-1s-8w, has been abandoned at 3,004 feet. Dameron and others' No. 1 Florence, NE cor. NW SE Section 11-3s-6w, is dry and abandoned at 850 feet. Tuohy and others' No. 1 Edwards, NE cor. NW NE Section 10-3s-5w, made 10 bbls. from sand at 1,024-37 feet.

Tulsa County

A. A. Davis has a machine on the location for No. 3 Perry, CEL SE NW Section 21-19-12. Glidden Oil Co.'s No. 1-A Wray, SW cor. NW Section 35-19-13, is spudding. S. F. Mallory and others' No. 1 McIntosh, NW cor. SE NW Section 28-19-14, is drilling at 900 feet. S. W. Anthony has the rig on the ground for No. 9 Sanderson, CSL NW NW Section 3-16-12.

Sand Springs Home's No. 2 Gates, CNL SE NE Section 4-19-11, is dry and abandoned at 2,250 feet. Jackson & Wise completed No. 2 Sango, CWL SW NE Section 21-19-12, for 25 bbls. in the Red Fork sand at 1,549-80 feet which was shot with 80 quarts. S. W. Anthony's No. 8 Sanderson, CNL NW Section 3-16-12, has been shut in for 3,000,000 feet of gas in the Taneha sand at 1,668-1,710 feet.

Hughes County

Carter Oil Co.'s No. 6 Alexander, NW cor. SE NE Section 19-8-10, is drilling at 500 feet.

McIntosh County

Aggas & Sessions' No. 3 E. Perryman, SE cor. NW NW Section 11-12-15, is dry and abandoned at 1,834 feet. No. 4 E. Perryman, SW cor. NW NW Section 11-12-15, is a dry hole at 844 feet. W. F. Sessions' No. 2 Foshee, CSL SE SW Section 16-12-15, lost the hole and was abandoned at 735 feet. No. 3 Foshee,

(Continued on Page 135)

GREENWOOD COUNTY LEADS KANSAS IN LARGEST NUMBER OF COMPLETIONS

By J. L. Dwyer
Staff Correspondent, Kansas Fields

Greenwood County, Kansas, is now in the lead with new production, holding the largest number of completions for the past week. The Oxford townsite is active, with several legal tilts over ownership.

The ownership troubles at Oxford afford much speculation as to future title trouble on railroad rights of way. According to a recent decision of the Kansas courts, unless the railroad company is actually using the land adjoining the tracks for right of way, the owners or the lessors should not be prevented from pursuing their drilling activities.

Pending final settlement of the lawsuit, Shawver and others, who have a good producing well upon the right of way, are continuing to produce the oil.

Butler County

Appleman and others' No. 1 Watson, NW cor. SW NW Section 36-24-4, is spudding. Cautro & Blankenship Petroleum Co.'s No. 1 Stern, SW cor. NE Section 27-27-6, is rigging up.

Chase County

Basom and others' No. 1 Evans, SW cor. NE NE Section 12-22-9, is dry and abandoned at 2,520 feet. No. 1 Leedy, NE cor. NW SE Section 26-22-9, is a dry hole at 2,568 feet.

Cowley County

Little Martha Oil Co. is rigging up machine for No. 3 Sandstrom, SW cor. NW Section 24-33-6.

Greenwood County

Transcontinental Oil Co. has a machine at the location for No. 2 Pixlee, SE cor. NE NE Section 10-22-10. Manhattan Oil Co. has the rig on the ground for No. 6 Shepherd, SW cor. NW NW Section 11-22-10. Braden, McClure and others' No. 3 Wegler, NE cor. SE Section 22-22-13, is drilling at 600 feet. D. B. Golden and others made location for No. 1 Knox, NE cor. NW Section 8-23-13. McCulloch Oil Co. is rigging up a machine for No. 1 Roglin, NE cor. SW SW Section 10-25-13. Rogers and others' rig is up for No. 1 Mills, SE cor. NW NW NW Section 2-26-10.

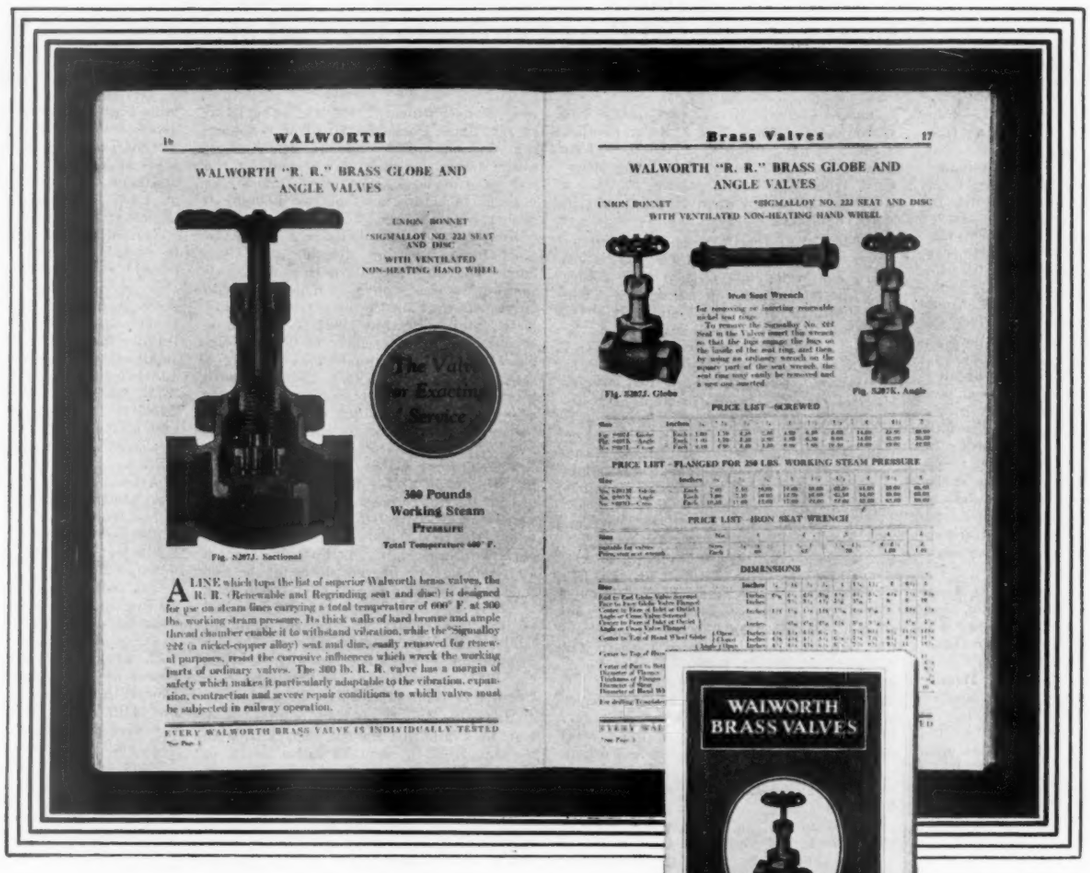
Manhattan Oil Co.'s No. 5 Shepherd, NW cor. Section 11-22-10, has been completed for 350 bbls. in sand at 2,098-2,151 feet. Skelly Oil Co.'s No. 1 Warrensburg, NE cor. NW Section 24-22-10, is dry and abandoned at 2,340 feet. Empire Oil & Refining Co.'s No. 17 Duby, SW cor. NE NW Section 23-22-11, made 10 bbls. after being shot in sand at 1,856-93 feet. Darby Petroleum Co.'s No. 4 Fankhouser, SE cor. SW SW Section 24-22-12, produced 275 bbls. from sand at 1,646-99 feet. Federal Oil Co.'s No. 1 Storrer, Lot 6 South, Section 30-22-13, made 420 bbls. after the shot in sand at 1,667-1,747 feet. Mendenhall and others' No. 1 Hoggart, SW cor. SE NE Section 16-25-13, has been abandoned at 1,599 feet in the lime.

Marion County

Anderson and others made location for No. 1 Benthe, SE cor. SW SW Section 31-18-5. Lample, Althouse and others made location for No. 1 Regier, NW cor. SW NW Section 18-21-4.

Rooks County

Krueger and others' rig is under construction for No. 1 Tatkenhorst, SE cor. SW Section 11-9-16w.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Pine Island Deep Well Makes 400 Bbls.

Gas Wells Predominate in Completions in Louisiana-Arkansas. Crude Oil Price Cut Due to Big Fuel Stocks

By D. H. Bancroft
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Nov. 21.—Confirmation of rumors of a pipe line from the Richland Parish gas field to St. Louis for transportation of Louisiana gas to that city, East St. Louis, intervening towns and probably Memphis, for industrial consumption, and the sale of controlling interest in the Shreveport Producing & Refining Co. to the Shreveport-El Dorado Pipe Line Co. with consequent doubling of the refining company's plant, announcement of which was made in last week's issue of The Oil & Gas Journal, were the chief developments of the week in north Louisiana and Arkansas territory. These were developments of the first part of the week and occupied first position until cuts in the price of Urania and Smackover crudes were announced Friday and Saturday by the Louisiana Oil Refining Corp. causing more or less speculation as to whether they will be followed by reductions on down the line. Wildcat activities received their share of attention in the completion of Mississippi's second successful test as a small gasser.

A 400-bbl. completion by the Arkansas Fuel Oil Co. in the Pine Island deep stuff, one for 220 bbls. initial for The Texas Company, and a 37,000,000-foot gasser by the Magnolia Petroleum Co. in the Carterville gas district of Bossier Parish were the features of the completions record which listed 21 items. It was very much a gas week as 16 of the 21 were gassers with a total initial open flow of 73,250,000 feet per day while there were but 2 new producers, both in Pine Island, with 620 bbls. initial. Five locations and derricks were abandoned and three tests were failures.

Increasing stocks of fuel oil and a weakening market were given as the reason for a 15-cent cut in Urania crude and 5 cents in Smackover heavy oil, sending the former to 75 cents per barrel and the latter to 85 cents. A reduction of 15 cents in Smackover light to $1 per barrel was for the reason, it was stated, that the posted price on this crude has been out of line with its real value as compared to the heavy grade.

The routine of drilling in Pine Island was broken during the week by Dixie Oil Co.'s No. 4 Huckaby in Section 11-21-15, which blew in while the crew was coming out with drill stem with about 10,000,000 feet of gas and caught fire, burning for two days before a Halliburton cementing crew put a couple of pumps on it and filled the hole with mud. The drilling crew had a small fire near the derrick, the night being cold and drizzly, and the gas, hugging the ground, immediately caught fire but no one was singed.

Arkansas Fuel Oil Co.'s No. 2 Bashara, Section 23-21-15, turned out to be well up to the average completion in the new 3,900-foot stratum in Pine Island, making 400 bbls. initially. The Texas Company's No. 49 Caddo Mineral Lands, Section 23-21-15, with 220 bbls. initial in the new deep stuff at 3,909 feet. It had previously tested 3,000,000 feet of gas in the older 3,600-foot oolites formation. One of the five abandoned locations was Magnolia Petroleum Co.'s No. 2 W. M. Bell in Section 6-17-16, in the Greenwood district on which derrick was built October 2 but never rigged up.

Magnolia Petroleum Co.'s No. 1 Zula Roberson in Section 23-23-12, Cartersville district, was completed as a 37,000,000-foot gas well at 3,077 feet with rock pressure rather less than the average, being only 960 pounds. Hatcher & Evans' No. 6 Hatcher in Section 16-19-4e, Ouachita Parish, in the Monroe gas district, was brought in with 3,000,000 feet of gas from 2,209 feet.

The one completion in Arkansas was Exchange Oil Co.'s No. 4 Berg, Section 4-16-15, Union County, a 6,000,000-foot gasser, at 2,599 feet after being deepened from 2,359 feet where it was a 2,000-bbl. producer when first brought in April 3, 1925.

East Texas territory had a crop of seven completions of which five were small gas wells, one a deep test failure and another a location abandoned without drilling. The Waskom district of Harrison County furnished most of the seven. Ford and others completed No. 1 Furrh on the E. M. Jenkins Survey at 1,004 feet, making 4,500,000 feet of gas. C. H. Lyons and others brought in No. 4 Bryson on the T. D. Wilson Survey, making 4,000,000 feet of gas at 965 feet. Magnolia Petroleum Co.'s No. 2 J. M. Trosper, J. H. Harrison Survey, was abandoned as a dry hole at 2,905 feet and they abandoned location for No. 4 J. M. Trosper on the same survey. R. W. Torrans' No. 1 Z. E. Vaughn, W. R. Anderson Survey, was the biggest well of the lot, 5,000,000 feet from total depth of 974 feet. A. L. Waller and others completed No. 1 J. M. Bryson, W. R. Anderson Survey, making 2,500,000 feet of gas from 958 feet. In Panola County Bethany Oil & Gas Co.'s No. 1 Burns on the W. A. Birdsong Survey made 3,000,000 feet initial at 1,015 feet and their No. 2 Richardson on the J. Yarnell Survey made 3,500,000 feet initial in 3 feet of sand total depth 1,009 feet. D. Thomason and others completed No. 1 Crenshaw, John Womack Survey, making 4,000,000 feet total depth 2,340 feet.

Optimism that has been growing among the fraternity here with expectations of considerable more activity developing after the first of the year as Seminole continued to decline was dealt a jolt by the Transcontinental Oil Co.'s big well in the Yates Pool, though after considering the character of that crude their alarm began to quiet down, and by the end of the week they were almost as hopeful as before news of the 65,000-bbl. gusher reached here.

Four or five deep wells in Pine Island and DeSoto, Sabine, Bossier and Claiborne Parishes are attracting much attention as they continue drilling. Ohio Oil Co. is nearing the mile post in No. 1 E. K. Smith, Section 12-21-15, a mile or so northeast of the center of Trinity Exploration, the last report on it being a total depth of 5,085 feet. Started with rotary rig, it changed over to cable tools after cementing 6⅝-inch casing at 4,603 feet and went back to rotary at 4,750 feet.

The Palmer Corp.'s No. 1 Sellington in Section 17-21-14, about 2 miles east of the current Trinity activity, cored what was thought at first to be the oolites from which the first 3,600-foot production was obtained in Section 14-21-15, but which on examination proved to be shale and lime. The core was taken at 3,626 feet, the hole was bailed dry at 3,694 feet and on the last report was coring again at 3,698 feet. Up to date, all the Trinity production tapped since last July 4, when the discovery well came in, has been confined to Section 14-21-15.

Magnolia Petroleum Co.'s wildcat deep test in Claiborne Parish, No. 1 Lee in Section 16-22-8, about 4 miles south of Haynesville production, is in lime at 4,298 feet after a salt water test at 4,098 feet. In Cotton Valley, about 12 miles west, one or two gas wells have been completed in the top of the Trinity horizon at around this depth.

Dixie Oil Co.'s No. 1 Jenkins, Section 9-12-11, DeSoto Parish, has passed the mile post with 474 feet to spare, total depth being 5,754 feet with about 4,000 feet of the hole made through lime with occasional streaks of shale, shell, pyrites and sand. A slight show of oil developed at 4,496 feet and an equally small show of gas at 5,319 feet.

Humble Oil & Refining Co.'s deep test in Section 15-19-11, Bellevue Pool, structurally the deepest hole ever drilled in this territory, although several others have attained greater footage, is drilling broken sand and shale at 4,474 feet. After leaving the shallow Bellevue pay it had a small oil show at 1,344 feet, salt water at 1,994 feet, a hard sand showing oil at 2,135 feet and dry tests of sandy lime at 2,685 feet and again from 2,739-67 feet, and at 3,674 feet. Everything that has appeared at all likely has been tested with sand testers.

Arkansas Fuel Oil Co. has drilled No. 1-A Logan, Section 23-10-12, about 1½ miles from production in the Pleasant Hill Pool of Sabine Parish, bailed dry at 3,106 feet after a show of oil and is now down 4,258 feet in lime, drilling casing which collapsed at 2,100 feet. Their No. 1C Logan, Section 32-10-12, is temporarily abandoned at 3,980 feet.

Daily average runs from the field again took a sharp slump in total shipments, especially in Smackover and Nevada County heavy oils and Caddo and Pleasant Hill light oils. On a total daily average shipment for the week of 147,013 bbls. the decline was 2,172 bbls. Louisiana runs were 49,570 bbls., 480 under last week's figure, and Arkansas' were 97,443 bbls., 1,692 under last week's. Shipments of Caddo light oils, averaging 12,680 bbls., were 475 less than last week's and Pleasant Hill shipments of 855 bbls. per day were 190 less than last week. Smackover heavy oil moved at the rate of 73,985 bbls. daily, or 1,360 under last week's average, and Nevada County shipments of 3,750 bbls. were 200 under the record of 3,950 bbls. established last week. Daily average runs from the several pools for the week ending November 19 and the week before were the following:

	Nov. 19	Nov. 12
Caddo light	12,600	13,075
Caddo heavy	4,385	4,374
Homer	4,700	4,710
Haynesville	6,945	6,935
DeSoto-Red River	4,100	4,000
Elm Grove	680	685
Bellevue	1,050	1,040
Cotton Valley	5,100	5,100
Urania	9,155	9,115
Pleasant Hill	855	1,045
Total Louisiana	49,570	50,050
El Dorado	5,948	6,020
Smackover, light	9,710	9,820
Smackover, heavy	73,985	75,345
Stephens	1,200	1,175
Nevada County	3,750	3,950
Lisbon	2,750	2,725
Bradley	100	100
Total Arkansas	97,443	99,135
Both states	147,013	149,185

NORTH LOUISIANA
Bossier Parish

Cartersville — Arkansas Natural Gas Co. has derrick up for its first test in this field, No. 1 Barnett, 660 feet south, 660 feet west, NE cor. SW NE, Section 17-23-12, about a mile west of production. Bahan & Dabis' No. 1 Dodson, Section 15-23-12, is shut down at 2,960 feet. Magnolia Petroleum Co.'s No. 1 D. H. Roberson, Section 26-23-12, set 10¾-inch casing at 807 feet and is drilling at 1,011 feet. O'Brien Brothers' No. 1 Dodson, Section 22-23-12, is drilling at 2,860 feet. Woodley & Collins are drilling No. 3 L. & A., Section 15-23-12, at 3,030 feet.

Bellevue—R. L. Crook's No. 8 Larkin, Section 14-19-11, waiting on standard rig at 396 feet, estimated good for 5 bbls. Humble Oil & Refining Co.'s No. 30 Bliss & Wetherbee, Section 15-19-11, is drill-

(Continued on Page 120)

MISSISSIPPI WELL COMPLETED AS A 3,000,000-FOOT GASSER

By D. H. Bancroft

SHREVEPORT, La., Nov. 21.—Completion of Mississippi's successful well as a 3,000,000-foot gasser at 2,702 feet was by far the overshadowing feature of wildcat activities in Shreveport territory, though announcement of Dixie Oil Co. entering Sabine Parish with its first test, and three wildcats to be drilled in De Soto Parish by R. O. Roy and pending test of a Nevada County, Arkansas, wildcat are sharing in some degree. The Mississippi gasser was Natural Gas & Fuel Corp.'s No. 1 Rye in the NW NE SW, of Section 22-15-17, Monroe County, about 12 miles south of Amory Petroleum Co.'s discovery well of a year ago. Following a small show at 2,445 feet a week ago it was drilled to 2,693½ feet where it made another show estimated at from 2,000,000 to 3,000,000 feet in 6 feet of sand. Deepened again to 2,702½ feet with 15 feet of broken sand, it bridged and after knocking out the bridge gauged 3,000,000 feet of gas and about 36 bbls. of salt water per day. It is believed the water is coming from a sand passed through after setting 6⅝-inch casing at 2,445 feet and a string of 4½-inch will probably be set to shut it off. Formation in which it was completed is believed to be the Trenton.

Northwestern Arkansas also reported a wildcat gasser of small proportions, much smaller than Mississippi's, in Ozark Natural Gas Co.'s No. 1 Reeves, Section 15-8-27, Franklin County. The well was estimated at 750,000 feet per day and was listed as a completion at 1,669 feet. Deeper sands in that territory have produced wells as high as 10,000,000 to 15,000,000 feet for the Empire Gas & Fuel Co., and this test may be drilled deeper. At any rate, it will strengthen opinion of that part of the State as a potential source of gas and in the event of certain developments in the gas industry will attract much more attention and activity to that locality, west of the already proven Clarksville Field in Johnson County.

In addition to these two wells there were four other wildcat completions, all in Louisiana and all failures. They were: A. H. Tarver's No. 1 Long-Bell Lumber Co., Section 5-8-13, Sabine Parish, about 10 miles southwest of Pleasant Hill production, dry and abandoned at 3,503 feet. Longoria and others' No. 1 Burkett, Section 9-9-13, 7 miles southwest of Pleasant Hill, abandoned without drilling. In Natchitoches Parish, Tate and others abandoned location for No. 1 Leopold in Section 4-10-10, and in Richland Parish, Helm and others abandoned No. 1 Tensas, Section 10-14-5e, after it had stood shut down at 22 feet for the last three months.

Announcement that R. O. Roy has assembled a block of approximately 15,000 acres comprising practically the entire N half of Township 13-13, and some on the east side of Township 14-13, appears to have caused quite a bit of comment. He has derricks up for No. 1 Tracy in Section 3-13-13, and No. 1 Whitaker in Sec-

(Continued on Page 119)

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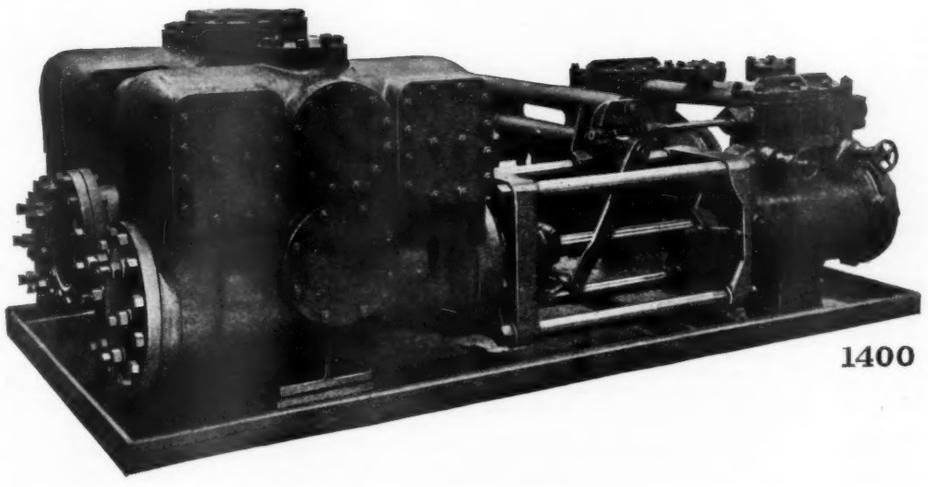

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Many Drilling to New Refugio Sand

Five Wells Now Producing, Two Making About 10 Bbls. Each. High Rock Pressure

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Nov. 21.—A whole flock of the shallower gas producers in the Refugio Field in Refugio County are now drilling or rigging up to drill to the new sand at 3,300 feet discovered by the Houston Gulf Gas Co. with its No. 6 Shelly. Five wells are now producing from the new sand and two of these are making about 10 bbls. each of oil. Houston Oil Co.'s No. 5 Fannie Heard, being deepened to the new sand, picked up a showing of oil and gas at 2,495-2,505 feet but cased it off and is down around 2,600 feet. The new deep sand has a very high rock pressure running as high as 1,300 pounds in some wells and a big volume of gas and it has indefinitely prolonged the life of that gas field from which both the Houston Gulf Gas Co. and the Houston Oil Co. have been drawing a big part of the gas they are selling in and around Houston. These two and William F. Morgan, Inc., and the Coast Gas Co., which is a Morgan company, are the only producers in the field, Morgan's gas going to the Houston Gulf Gas Co. pipe line. At the close of last week there were nine wells in the Refugio Field being deepened to the new sand.

Completions of the week in other fields of Southwest Texas have not been significant. Texas and Humble abandoned two wells in the Dale Field, Nos. 5 and 5 Clingensmith. It was expected by now one or two more locations would be made and drilled in that field before quitting it but none has been announced. Only two or three rigs are running and they will be reporting completions by the end of this week.

O. W. Killam's No. 1 R. Hinnant in Survey No. 10 of Zapata County, a mile north of the old Mirando Field, has a showing of oil at 1,530 feet, and it has been expected to make a well. It is 150 feet from the southeast and southwest lines of Block 16, Survey 10, and on a test showed some oil and salt water and bridged over. Ever since the early days of the Mirando district an effort has been made to pick up production from the Mirando Valley Field north to connect with the other pools and this well may make it though it was not looking especially good at last reports.

A feature of more or less importance in the Kingsville Field is the Humble company's No. 1 Kivlin which for a time was thought lost but which has been coming back and has built up around 400 pounds rock pressure and may be saved. The well was drilled to around 4,000 feet but was plugged back to 2,150 feet. It is an east offset to the Humble well that showed a lot of gas at that depth and ran wild but was finally turned into the gas line with drill stem and junk still in the hole and much of the hole uncased. Later an attempt to complete it failed and it was plugged and abandoned. No. 1 Kivlin may save the day for that horizon of gas sand in that end of the field. Houston Oil Co. rigged up on another well in the Kingsville Field but has been letting it stand for some days without spudding in.

Jim Hogg County

Magnolia Petroleum Co.'s No. 31 Merchants State Bank, Survey 415, Randado Field, at 1,237 feet is a 25-bbl. well.

Alworth-Stevens-Hild's No. 22 M. Garza, Survey 39, Block 6, Alworth Field, at 1,007.6 feet, is a 10,000,000-foot gas well.

Zapata County

Henne, Winch & Fariss' No. 1 M. Martinez, Survey 120, at 1,976 feet, has been abandoned dry.

New Locations

Magnolia Petroleum Co.'s No. 32 Marchants State Bank, Survey 415, Randado Field, Jim Hogg County, skidding derrick over.

F. J. Bates' No. 1 Bruni, Survey 47, Bruni Subdivision, Webb County, has derrick up and is moving on.

Houston Oil Co. (Sun) No. "C"-2 Benavides, corner of Blocks 7, 8, 61, 62, is drilling at 985 feet with surface casing set at 52 feet.

Guadalupe County

O. J. Muelder's No. 3 Rosebrock, Duran Survey, at 615 feet, is good for 2 or 3 bbls.

Medina County

Western Gas & Fuel-Witherspoon's No. 3 Adams, Block 17 of the Adams gas field, at 940 feet topped sand, total depth 952 feet, is a gas well gauged at 26,277,000 feet with 390 pounds rock pressure.

Gonzales County

The Texas Company's No. 2 Plowman, Byrd Lockhart Survey, and No. 3 Plowman, same survey, have been abandoned at approximately 1,200 feet, both wells core tests.

Caldwell County

Magnolia Petroleum Co.'s No. 6 Branyon, James Berry Survey, Luling Field, at 2,199 feet is a 30-bbl. well; No. 19 Rios, John Henry Survey, same field, at 2,126 feet is a 50-bbl. well.

The Texas Company's No. 5 Clingensmith, Dale Field, Squire Damon Survey, has been abandoned at 2,332 feet; No. 6 Clingensmith, same field and survey, has been abandoned at 2,394 feet.

Bauchman and others' No. 1 Page, Dorothy Benton Survey, has been abandoned at 1,594 feet in chalk 10 feet.

Kleberg County

Humble Oil & Refining Co.'s No. 4 Kleberg, Section 40, Block 10, has been abandoned dry at 3,144 feet and the pipe pulled.

Live Oak County

Roy Shipman's No. 1 Kolb, Simmons Tracts No. 2,420, Block 44, at 1,300 feet is a gas well of 4,730,000 feet with 375 pounds rock pressure.

Morgan-Roxana's No. 1 West Estate, Survey 2, has been abandoned dry at 2,207 feet.

San Patricio County

Houston Oil Co.'s No. Sun-A-2, Roos Survey, Block 8, has been completed a 30,000,000-foot gasser.

Milam County

W. A. Jones' No. 1 Casparis, Kate Casparis 100-acre tract, at 1,327 feet has been abandoned dry.

McMullen County

George Pickett's No. 1 Jacob, Survey 7, at 3,030 feet has been abandoned temporarily, but expects ultimately to move back and drill deeper.

New Locations

F. Nichols has derrick up and moving in rig for test 1½ miles south of Normanna in Bee Couunty.

Pat M. Armstrong's No. 1 Hardeman, Miles G. Dykes Survey, 150 feet to northwest and southwest lines of J. T. Hardeman farm in Caldwell County, is rigging up.

Pat M. Armstrong's No. 1 Louis Mangold, J. Kaufman Survey No. 62, in Medina County, has set surface casing at 200 feet and resumed drilling.

C. E. Lange's No. 1 Adams, Survey 71, Adams gas field in Medina Counuty, has set surface casing at 60 feet and is changing from spudder to rotary rig.

Houston Oil Co.'s No. 4 Humble, Roo Survey, Block 19 in San Patricio County, is rigging up; No. 5 Humble, same survey and block, is location 167 feet to south and west lines; No. 2 Ragsdale, J. N. Seguin Survey, 575 feet west of No. 1, is rigging up; No. 3 Ragsdale, same survey, is location 1,200 feet north of No. 1.

Saxet Oil Co.'s No. 1 Henry, Drummond Survey, San Patricio County, is location in Block 35; No. 9 Dunn, Dunn-Rachal Survey, is location 2,850 feet to north and 813 feet to east lines; No. 1 White Point Development Co., is location.

Edward R. Herwick's No. 1 Tsesmelis has been spudded in, in San Patricio County.

I. N. Boicourt's No. 1 well is a location in Mexico, 12 miles up river from Piedras Negras, Mexico and Eagle Pass, Tex.

Saxet Oil Co.'s No. 10 Rachal, White Point gas field, San Patricio County, has set surface casing at 400 feet; No. 2 White Point Development Co. has set surface casing at 400 feet.

Mission Drilling Co. has derrick up for No. 1 Morris in the White Point gas field in San Patricio County.

Perry and others' No. 1 Terrell is drilling in Nueces County.

Cole Gas Field—Duval

O. W. Killam's No. 8 R. Benavides, Survey 11, Block 6, located 585 feet to northwest and 150 feet to southwest lines, at 2,570 feet tested oil and salt water and is now drilling at 3,625 feet; No. 3 Bruni, Survey 585, located 2,140 feet to east and 150 feet to north lines, is drilling at 1,200 feet. Houston Oil Co.'s No. A-2 Bruni, Survey 10, Block 48, located 200 feet to northwest and 150 feet to northeast lines, at 2,342-49 feet tested gas through drill stem. Cole Petroleum Co.'s No. 50 Benavides, Survey 5, Block 7, located in the Cuellar grant, is drilling at 2,000 feet.

Piedras Pintas Dome

Humble Oil & Refining Co.'s No. 7 Walsh, Survey 185, located 2,050 feet to east line and 1,750 feet to north line, has sand at 3,821-25 feet.

Randado Field—Jim Hogg

Magnolia Petroleum Co.'s No. 31 Merchants State Bank, Survey 415, at 1,240 feet to west and 2,025 feet to north lines, has sand at 1,237 feet and set casing. Houston Gulf Gas Co.'s No. 14 Palacious is making location.

Alworth Pool

Alworth-Stevens-Hild's No. 22 M. Garza, Survey 39, Block 6, location changed to 350 feet to southwest and 430 feet to southeast lines, has sand at 1,003-07 feet.

Schott Field—Webb

Magnolia Petroleum Co.'s No. 11 Garcia, Survey 58, is location. Colon Schott's No. 1 Bruni, Survey 835, located 900 feet to east line and 150 feet to south line, is moving on.

Carolina-Texas Field

D. J. Simmons' No. 2 de la Garza, Survey 335, Block 8, is standing at 400 feet. Houston Oil Co.'s No. 3 S. Benavides, Survey 683, located 350 feet to

(Continued on Page 127)

GASSER IN WESTERN LIVE OAK; GUADALUPE WILDCAT FINDS OIL

By B. D. Stevenson

SAN ANTONIO, Tex., Nov. 21.—Roy Shipman has completed a 4,730,000-foot gas well in the western edge of Live Oak County, 5 miles due south of the Calliham oil and gas field in McMullen County. Depth is 1,300 feet and so far it is showing no water. Several wells have been drilled .. that part of the country on what is known as the Simmons tracts, this well being on Tract 2,420 of Block 44 of the Simmons Subdivision of Live Oak County, and a little over a half mile east of the McMullen County line and on the south bank of the Nueces River. Gas has been encountered at approximately the depth of this well but water trouble has prevented the completion of a well that would hold up in gas production. For a stretch of over 10 miles up and down the McMullen-Live Oak County line, from the Crowther oil field on the north to this well on the south, there is more or less evidence of an oil and gas country with a small amount of shallow oil recovered in both the Calliham and Crowther Fields.

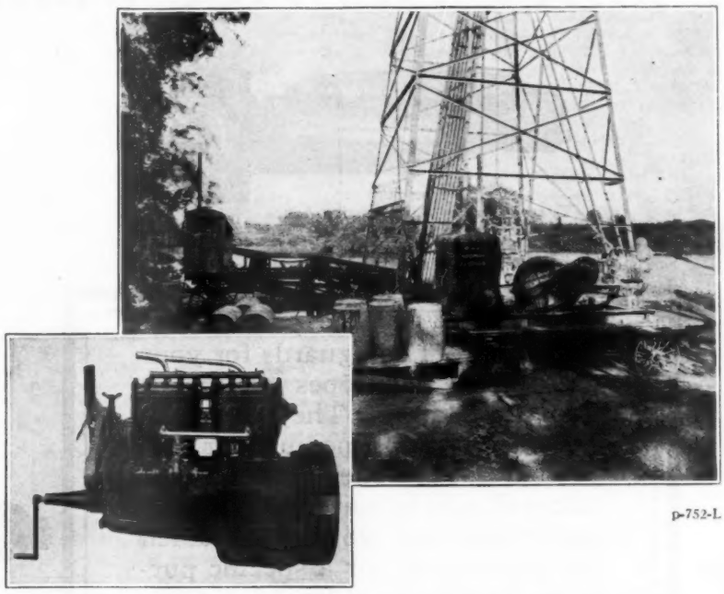
One other little 3-bbl. well in the western edge of Guadalupe County in the New Berlin territory at 615 feet, drilled by Otto Muelder, is the best that Southwest Texas has in the way of wildcat developments for the past week. The Muelder well is in the northeast-southwest trend of shallow production that starts with the Somerset Field in Atascosa County on the southwest and runs northeast across the south half of Bexar County into Guadalupe with some little fields and spots where oil has been "hit" sprinkled along the way. The Muelder well is considerably removed from any developed acreage.

In northwestern Val Verde County the Mills ranch well of O. O. Owens is said to have increased in gas up to 800,000 feet with deepening and had a slight show of oil at 2,880 feet. In the northeastern corner of that county Magnolia is down 5,060 feet in its No. 1 Whitehead and Traves is ready to spud in a few miles to the west. It is learned that considerable leasing and geological work is going on in Edwards, Real, Sutton and Schleicher Counties on the theory that this territory will prove to be on the southeast side of the Permian Basin and in a territory for possible big production. T. C. Hadley of San Antonio has the only well drilling in Sutton County at this time. It is on the Ross ranch, southeast of Sonora and was started by the National Potash Co. and taken over by Hadley. It is a diamond-core test and major companies were anxious to contribute by buying acreage in order to get the information on the diamond cores. The well at 800 feet is having to set casing to protect the hole and was about to set 3-inch which was ample to accommodate the diamond core tools but has decided to set 5⅜-inch, thinking that the hole may pick up production and in that event would have large enough casing that the well could be completed.

Two wells are drilling to the north in Schleicher County, putting "drilling" in quotation marks since both are shut down, one the General Sacur's No. 1 Whitten in the center of the west half of Section 33, Block 1-F, G. C. & S. F. Survey, at 395 feet and the other the McGee No. 1 Robinson in Section 23, Block B, of the G. H. & S. A. Survey at 3,004 feet with salt water at 2,935 feet. Other than these that whole scope of country is untouched and very few wells have ever been drilled. E. H. R. Green thought he had a well for a long time and tried hard to bring it in at a point about 15 miles south of the north line of Edwards

(Continued on Page 88)

Waukesha Equipped Portable Rotary Rigs on Rio Brazos



P-752-L

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P-768-L

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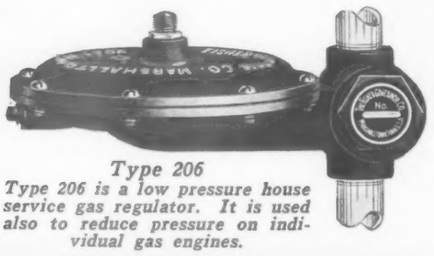

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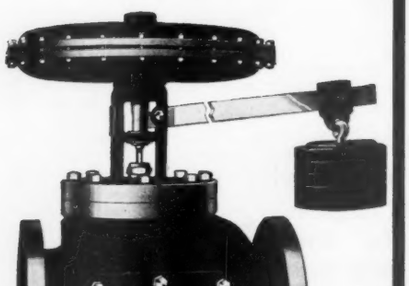

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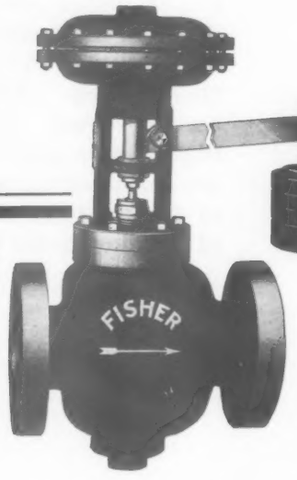
Type 210 is generally used for reducing the gas pressure in distribution mains, reinforcing lines, or service mains. As a low pressure regulator on such service it will maintain a gas pressure of a few ounces regardless of normal pressure pulsations on the inlet side of regulator. This type is simple in design, has few working parts, and is ruggedly built for severe service.



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Another Deep Sand at Pierce Junction

Old Well Deepened From 4,754 Feet Starts Flowing 2,500 Bbls. 31 Gravity Crude From Depth of 5,260 Feet

By Nell Williams
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Nov. 21.—What may prove to be a new prolific, deep producing sand was uncovered the past week at Pierce Junction when the Navarro Oil Co.'s No. 3 Cain came in flowing 2,500 bbls. of 31 gravity pipe line oil at a total depth of 5,260 feet, the bit being 31 feet in. This is the deepest well ever drilled in the Pierce Junction Field. The well is on the east flank of the dome in the heart of the original field, which was opened by a shallow sand. It is virtually an offset to the Cullen producer which has been flowing approximately 2,000 bbls. daily for the past six weeks from the 4,800-foot level. Pierce Junction is just southwest of Houston in Harris County.

The Navarro producer is an old well which was worked over and deepened, it originally being completed as a good well around 4,754 feet. That level is one of several others which have been proved up at Pierce Junction. The field now bids fair to rival a number of other famous pools, principally Spindletop, which almost regularly rise to the foreground by the uncovering of deeper oil horizons.

Barbers Hill

In addition to Pierce Junction, Barbers Hill in Chambers County came in for its share of news when Bennett Petroleum Corp.'s No. 1 Kirby came in flowing 1,500 bbls. of 21.5 degrees gravity oil through a half-inch choke from a sand at 5,434-68 feet. This virtually is a semiwildcat, being on the east side of the dome. Production is from the Oligocene formation.

This well, however, was short lived, as sediment broke in, evidently by the seal giving way, killing the well. Efforts so far to complete the well have been unsuccessful. A string of 4½-inch casing was set in the hole to shut off the sediment, but in swabbing the well back in the swab was lost, neecessitating a fishing job. After the swab was recovered, the operators met additional troubles with the seal, but these are expected to be remedied early this week.

Barbers Hill got another well during the week in Humble Oil & Refining Co.'s No. 4 Myers fee, which came in flowing by heads 240 bbls. of pipe line oil during the first 20 hours. This is an old well deepened to 3,099 feet.

Gulf Coast operators continue to watch the East Hackberry district in Cameron Parish, Louisiana, where Calcasieu Oil Co. recently brought in its wildcat dome well the No. 2 Caldwell flowing approximately 1,000 bbls. of pipe line. Production in the well is holding up remarkably, averaging an estimated 900 bbls. daily the past week.

It is reported Calcasieu Oil Co. is making a location for an offset, the No. 1 Oliver, approximately 150 feet from the producer. It is on a tract inside the 2,500-acre block owned jointly by the Calcasieu, Magnolia Petroleum Co. and Union Sulphur Co. It also is reported here that Yount Lee Oil Co. is moving a couple of rigs into the Hackberry district.

In the Vinton Field of Calcasieu Parish, Vinton Petroleum Co. has a new well, No. 52 Gray, pumping 150 bbls. daily from a sand at 2,350 feet. Wilson-Broach also have a pumper, No. 5 Koonce, in the Edgerly district, but no reports have been received as to the production. Hercules Oil Co.'s No. 3 Paraffine, Edgerly, which was brought in two weeks ago flowing 50 bbls. hourly, was making only salt water last week, so the liner and strainer are being pulled preparatory to deepening the hole.

Other completions in the Gulf Coast territory were of little interest, several being workovers. However, of some note is the abandoning of Rycade Oil Corp.'s No. 12 Nash, Nash Dome, the deepest test drilled in the Gulf Coast district, going to 6,282 feet. Further drilling was prevented by a heaving hole. Rycade got a 30,000,000-foot gasser with a spray of oil in No. 16 Wisdom, Nash Dome, from a total depth of 4,222 feet. In Spindletop, Yount Lee Oil Co. has completed No. 15 Gladys, flowing 1,000 bbls. from 4,231 feet.

Drilling Activity

Some new drilling activity is forecast both at Spindletop and at Boling, where a number of new locations have been staked. Yount Lee Oil Co. alone has four new locations at Spindletop, while at Boling eight new tests not previously reported, are to be drilled by various companies.

Geophysical work is continuing in many parts of the Gulf Coast district. The Gulf Production Co. is doing some shooting between Oakhurst and Old Waverly in San Jacinto County, while in various parishes of southern Louisiana the Sun Oil Co., Roxana Petroleum Corp., Gulf Refining Co. and Pure Oil Co. have geophysical crews. A torsion balance crew is reported being operated by the Calcasieu Oil Co. in St. Martin's Parish.

Leasing is at low ebb throughout the territory, although three companies in particular are reported doing some blocking in San Jacinto County.

Daily average production continued to decline sharply in the Gulf Coast district and additional drops were reflected in East Central and Southwest Texas fields. Pierce Junction was the only individual field to show any substantial gain. Estimated daily average production by fields was:

Gulf Coast	
Spindletop	49,167
Saratoga	1,081
Batson	1,274
Goose Creek	7,829
Sour Lake	3,909
Hull	14,510
Big Creek	2,978
Columbia	9,104
Humble	4,561
Pierce Junction	10,604
Blue Ridge	4,075
Markham	260
Orange	4,437
Damon Mound	800
South Dayton	468
South Liberty	2,070
High Island	29
Moores Field	42
Boling	2,272
Nash Dome	1,630
Barbers Hill	1,000
Vinton	4,909
Starks	370
Edgerly	2,095
Evangeline	1,319
Lockport	5,179
Sulphur	450
Hackberry	900
Total, this week	137,322
Total, last week	139,389
Decrease	2,167
East Central	
Mexia	8,979
Cedar Creek	1,185
Nigger Creek	1,490
Currie	562
Wortham	2,460
Richland	702
Powell	13,678
Total, this week	29,076
Total, last week	29,577
Decrease	501
Southwest	
Somerset	2,360
Lytton Springs	1,694
Dale	438
Luling	14,969
Miscellaneous	9,096
Total, this week	28,557
Total, last week	28,595
Decrease	38

Austin County

Humble Oil & Refining Co. has a 5,000,000-foot gas well in the Raccoon Bend district in its No. 1 Kelieswski. The gas is from a sand at 1,017 feet and has a rock pressure fo 400 pounds. This company is building a derrick for another test at Raccoon Bend, the No. 1 Wilson. Its No. 2 Gotosky is down around 1,000 feet in hard sand. No. 2 Payne is drilling sandy shale below 1,078 feet.

Alexander and Lyle's No. 1 Goebel has been shut down after setting 40 feet of 10-inch surface casing. T. F. Wood's No. 1 Trenchman, 2 miles west of Peters, also is shut down at 1,092 feet.

Brazoria County

On Allen Dome, Roxana Petroleum Corp. encountered sand shale with an odor of oil at 5,207 feet in No. 1 Allen State. In the same district, this company's No. 1 Random is drilling shale and lime at 3,076 feet. Roxana's No. 2 Bell, Clemens Dome, is drilling blue shale and lime at 4,456 feet.

Gulf Production Co.'s No. 3 Perry is drilling gumbo at 2,660 feet. Rucks and associates' No. 1 Muldoon, in what is known as Slop Bowl, is shut down at 600 feet. Starks and associates' No. 3 Hinckle encountered a water sand at 1,530 feet. Texas Gulf Sulphur Co. is setting a string of 8-inch casing at 1,289 feet in No. 1 Pabst and was coring at 610 feet in No. 2, this lease. A string of 8-inch casing also is being set in No. 3 Davidson at 5,451 feet. No. 1 Proebstle is coring at 2,020 feet.

Chambers County

The Barbers Hill Field of Chambers County was featured by two wells during the week. Mills Bennett Petroleum Corp.'s No. 1 Kirby, on the east side of dome, was brought in flowing 1,500 bbls. daily of 26.5 gravity oil through a half-inch choke 34 feet in sand at a total depth of 5,468 feet. However, sediment broke in and a string of 4½-inch casing was run, and then, in swabbing the well back in, the swab was lost, necessitating a fishing job. Another well at Barbers Hill was Humble Oil & Refining Co.'s No. 4 Myers fee. This well flowed 240 bbls. of pipe line oil by heads in the first 20 hours, production being from a depth of 3,099 feet. In the same district, S. T. Hindman and associates' No. 1 Fisher is shut down in shale at 4,690 feet.

At High Island, Gulf Production Co.'s No. 2 Smith is drilling below 3,250 feet, and McLean Oil Co.'s No. 10 Cade below 3,600 feet. Pure Oil Co.'s No. 1 Lost River, Lost Lake district, is shut down in sand at 309 feet.

DeWitt County

DeWitt County is to get another test in J. F. Roe and associates' No. 1 Lenhart Brothers, a location for which has been staked. All other operations in the county are at a standstill.

Fort Bend County

At Nash Dome, Rycade Oil Corp.'s No. 12 Nash is being abandoned. This is the deepest test drilled in the Gulf Coast territory, going to 6,282 feet. It is being abandoned because of trouble with a caving hole and stuck drill stem. Rycade, however, got a well on this dome the past week when No. 16 Wisdon came in from a sand at 4,222 feet making 30,000,000 feet of gas and an estimated 250 bbls. of oil. This test originally blew in as a dry gasser at 4,189 feet. It then was sidetracked at 1,698 feet and drilled to its present total depth. Rycade has three other tests at Nash Dome, the Nos. 17, 18 and 19 Wisdom.

At Blue Ridge, J. S. Abercrombie & Co. are rigging up for No. 4 Robinson, and are drilling at 3,425 feet in No. 2 West Schenck and 3,890 feet in No. 4 West Schenck. Tom Blakely and associates' No. 1 Blakely is down below 1,500 feet, and Cullen and associates' No. 1 Blakely around 1,400 feet. H. R. Cullen's No. 1 Lafferty is drilling lime at 929 feet topped at 897 feet. Cunningham Production Co. is getting ready to deepen its No. 1 Blakely. Gordon & Blakely's No. 2 Blakely is drilling below 1,625 feet, and No. 1 Sharp around 1,000 feet. In the same district, Gulf Production Co. is rigging up for No. 13 West Schenck. Navarro Oil Co. is pulling casing in No. 1-B Robinson and will reset it at 4,019 feet preparatory to deepening the well. Same Watt's No. 1 Blakely is drilling below 2,210 feet.

At Big Creek, Gulf Production Co.'s No. 43 Davis is drilling below 3,400 feet, and No. 44 Davis below 3,600 feet. Gulf's No. 14 Moore, Orchard, is in gumbo and lime at 1,845 feet, and No. 2-A Beard, Long Point, is in a hard, sandy shale and lime formation at 1,130 feet. In the latter district, Gulf has a location for another test, the No. 6 Woolf.

At Boling, Sun Oil Co. is drilling around 200 feet after having set 12-inch surface casing at 157 feet in No. 2 H. R. Farmer. This company's No. 1 Kasparek, this field, is in gumbo at 1,657 feet. It cored a sand and shale at 1,628-48 feet, but which failed to show any oil.

Grimes County

Schnoffer and associates' No. 1 Black on the Charles Edwards Survey has been abandoned at 3,257 feet. It was in a sand and shale formation. A showing of gas was reported at 2,625 feet in this test. J. Pundt and associates' No. 2 Cuthrell has been shut down at 623 feet. It was in gumbo.

Hardin County

Hardin County's only completion was a 10-bbl. pumper in Paraffine Oil Co.'s No. 43 Knight. Production is from a shallow sand at 1,115 feet. S. R. Buchanan's No. 95 Millhome is drilling below 1,215 feet. Capitol Oil Co.'s No. 9 Hodges is down 3,860 feet. East Batson Oil Co.'s No. 7 Bates, Batson Field, has started drilling and at last reports was below 250 feet. The Texas Company's No. 1 Sterling is drilling below 4,150 feet.

Gulf Production Co.'s No. 17 Tabor, Saratoga, is drilling around 1,400 feet, and in the same district Regna Oil Co. has started No. 2 Teel, drilling now below 510 feet. Weldon Oil Co.'s No. 13 Hooks, Saratoga, tested dry at 525 feet. Orange Petroleum Co.'s No. 4 Merchant, Sour Lake Field, is drilling below 3,800 feet.

Harris County

Navarro Oil Co. uncovered a new deep producing sand in the Pierce Junction Field when No. 3 Cain came in flowing 2,500 bbls. of oil from a total depth of 5,260 feet. This well is in the heart of the original Pierce Junction Field and is practically an offset to the Cullen well which has been flowing around 2,000 bbls. daily for the last six weeks from a depth of 4,800 feet. Associated Oil Co.'s No. 1 Boyles at Pierce Junction is drilling below 4,365 feet. Joe Bashara's No. 2 Higgins is down around 2,700 feet. Gulf Production Co. has cemented 6⅝-inch casing at 4,579 feet in its No. 1 H. M. Perry. This test encountered an oil sand up to a total depth of 4,621 feet. This company's No. 21 E. R. Taylor is drilling at 4,550 feet, and No. 22 Taylor at 2,930 feet. How-Tex Oil Co. has a location staked for No. 1 Hammon, a new test at Pierce Junction, and Hute Oil Co. is rigging up for another, No. 1 Traper. Leonard Petroleum Co. is drilling at 3,040 feet in No. 1 Marland fee, and Moody Corp. at 4,315 feet in No. 2 Hume. Rio Bravo Oil Co.'s No. 1 P. S. A. is drilling below 2,640 feet, and No. 7 below 3,200 feet. This company's No. 1 G. H. and S. A. is down 2,550 feet, and No. 101, this lease, 2,625 feet. T. G. Shaw and associates' No. 1 Fitzsimmons is drilling below 1,300 feet. Smith and associates' No. 1 Humble fee has been shut down at 4,320 feet, having encountered salt. Sun

(Continued on Page 115)

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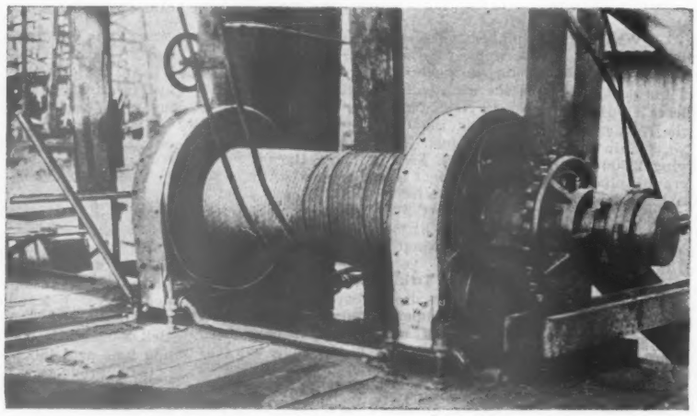

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Big Gas Well Found on Hiawatha Dome

Iles Dome Has 500-Bbl. Well. Dry Sand in Dakota in Northeastern Colorado. New Mexico Well Checks With Winkler County

By Tolbert R. Ingram
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Nov. 19.—A big gas well on the Hiawatha Dome for the Ohio Oil Co. in its No. 1 Kuykendall, producing 55,000,000 feet from the Wasatch formation of the Tertiary age, at 2,000 feet; a dry sand in the Dakota at 5,207-30 feet, on the Willard Dome in Logan County, in the Northeastern Colorado Oil Co.'s No. 1 State, and a 500-bbl. well in the Morrison sand in the Texas Production Co.'s No. 17 Parkinson, on the Iles Dome in Moffat County, were the features of the week from Colorado.

In New Mexico, the Texas Production Co.'s No. 1 Rhoades in southeastern Lea County, made 23,000,000 feet of gas and 120 bbls. of oil in a test after separator was installed and has been completed and shut in. This well checks more closely with the Winkler County, Texas, wells than any test drilled in New Mexico and indicates the trend of production northwest towards the Maljamar area. Another well will be drilled in the same zone at once.

Wyoming reported no important completions for the week with Oregon Basin and the La Barge district showing the greatest activity. The Amsden sand was found barren at 3,832 feet in the Utah Oil Refining Co.'s test on the Black Mountain structure, and several small pumpers are reported in the southwestern part of the state.

Another failure was reported in southeastern Utah with the abandonment of the Midwest Exploration Co.'s No. 1 Hughes on the enormous Elk Ridge structure when granite was encountered. Another deal has been made whereby the Utah Southern Oil Co. has disposed of half interest in the Colorado River structures to B. O. Jones and associates.

New Mexico

The results in the Texas Production Co.'s No. 1 Rhoades, SE NW NW Section 22-26-37, in southeastern Lea County, New Mexico, just north of the Winkler County, Texas, boundary, foreshadows a big play in that area. After installing a separator and making a test, the well has been completed at 3,216 feet and shut in. It showed for 28,000,000 feet of gas and made 120 bbls. of oil. The operating company is considerably encouraged by the showing in this well which it describes as checking better with the Winkler County, Texas, producers than any well drilled in New Mexico. Seventy-five miles to the northwest, in Eddy County, the same company's No. 1 Robinson, Section 1-17-31, was completed recently at 3,885 feet and shut in as a gas well after making 8,000,000 feet of gas and 5½ bbls. of oil.

These two wells are in a direct line northwest from the Winkler County operation and in comparing the two tests it is pointed out that the Rhoades well has more oil and more gas at a lesser depth and compares more favorably with the Texas operation. In between these two wells is where the big play is expected to center. The Marland Oil Co. of Colorado and the Midwest Refining Co. have large holdings in the district, while a number of other major companies are well represented. The extent of the interest is shown by the fact that two townsite propositions are already being worked out. One of these projects will be located at Jal, and the other has been named Dublin, after the man promoting it. The Texas Production Co. has been approached by a number of parties seeking to contract for the gas, but it has not yet decided what it will do with the well. Another test in the same zone will be started at once, but its location has not yet been announced. The two tests drilling near the Robinson well are expected to throw more light on that area within the next few weeks.

The Texas Production Co.'s other drilling well in Lea County, its No. 1 Lockhart, SE SW Section 5-22-38, is drilling in lime at 4,274 feet, but its prospects are not very encouraging. It topped the lime at about 4,035 feet and was in bentonite at 4,138-40 feet. Drilling is not expected to continue much further. Midwest Refining Co.'s No. 1 State, NE Section 9-19-38, in the Hobbs area, is drilling in red shale at 475 feet and carrying the 15½-inch casing. Maljamar Oil & Gas Co.'s No. 2 Beardsley, SE NE Section 15-17-32, had about 100,000 feet of gas in red sandy shale at 3,247-52 feet and is drilling below 3,340 feet. Inglefield & Bridges' No. 1 State, Section 4-17-34, ran into salt water at 5,313 feet, bailing 6 bbls. a day, and is is drilling ahead at 5,329 feet.

Eddy County

In Eddy County, the Pueblo Oil Co.'s No. 1 Gessert, NW NE Section 1-17-31, had a show of gas at 3,705 feet, which blew the tools up the hole 30 feet and caused it to bridge, shutting off the gas. After failing to fish out the tools, sidetracking now is in progress. This well topped the salt at 917 feet and found the bottom at 1,935 feet. It had a show of oil, gas and water at 3,165 feet, and topped the lime at 3,570 feet. The Pueblo Oil Co.'s No. 2 Yates, Section 33-17-28, encountered an oil sand at 2,133-40 feet, making a good show of free oil and is drilling below 2,175 feet. It will be carried to 2,280 feet. The Texas Production Co.'s No. 2 Robinson, NW SW Section 25-16-31, is shut down in lime at 3,620 feet while a new drilling line is being installed. R. D. Compton's No. 4 Mann, SW NW Section 4-18-27, is drilling below 1,400 feet. Empire Gas & Fuel Co.'s No. 4-A Russell, SW SE Section 35-17-27, is drilling below 1,325 feet. Getty Oil, Inc.'s, No. 1 Hinkle, NE cor. Section 23-20-29, is drilling below 1,300 feet. It had a show of gas at 1,205 feet. The salt was topped at 350 feet and bottomed at 1,010 feet. Levers & Carper's No. 5 State, NW Section 3-18-28, is drilling below 700 feet. Skelly Oil Co.'s No. 1 Beulah Lynch, Section 22-17-31, which plugged back to 3,622 feet, is averaging 18 bbls. a day of which about a half barrel is water. It probably will be shot. Flynn, Welch & Yates' No. 55 State, SE NW NE Section 32-18-28, is spudding at 50 feet.

Chaves County

In Chaves County, the Twin Mounds Oil Co.'s No. 2 Fahrlander, SE SW Section 11-6-27, in the Olive Basin district, has been abandoned after drilling to 110 feet. McQuigg & McQuigg's No. 1 Neis, NW NW Section 7-5-29, is drilling below 600 feet. These are the only active operations in the county following the abandonment of the Texas Production Co.'s Dunken Dome test.

In Curry County, the Clovis Oil & Gas Co.'s No. 1 Hoskinson, NE Section 21-3-36, is drilling below 3,750 feet after making a water shutoff at 3,670 feet.

In Guadalupe County, the Hanchett Oil Co.'s No. 1 Rutherford, SW NE Section 24-8-24, Alamo Gordo Creek district, is drilling at 4,020 feet. It had 2,000 feet of water at 3,530 feet.

In McKinley County, the Benedum-Trees' No. 1 Santa Fe Railway, SW SW SW Section 19-17-9, in the Ambrosia Lake district, is drilling at 260 feet. Producers & Refiners Corp.'s No. 2 Hospah, NW SW Section 12-17-9, is drilling in hard sand at 1,199 feet. Continental Oil Co.'s No. 1 Santa Fe Railway, SW SW Section 9-17-7, on the Carica Dome, is drilling at 2,680 feet after passing through the Mesa Verde sands where it found water, and is headed for the Dakota.

In Quay County, the Ohio Oil Co.'s No. 1 Wells, SW SE Section 24-7-29, on the Jordan Ridge, is drilling at 4,145 feet.

In Roosevelt County, the Amerada Petroleum Corp.'s No. 1, on the Portales structure in Section 3n-35e, has abandoned location and probably will make a new one.

In San Juan County, the Continental Oil Co.'s No. 17, Section 2-29-19, on the Rattlesnake Dome, is redrilling at 3,770 feet, and is about at the bottom of the old hole at 3,785 feet. This is a test to the Pennsylvanian.

Utah

Another deal involving the leaseholds on the Colorado River structures south of Moab in southeastern Utah was announced this week. B. O. Jones of Denver, vice president and director of the Utah Southern Oil Co., resigned from that office on November 1 to complete a deal in behalf of himself and associates for the acquisition from the Utah Southern of a half interest in the Cane Creek, Shafer, Lockhart and Indian Creek Domes, south of Moab, and in the Salt Valley anticline, 25 miles northeast of the Cane Creek structure. The Utah Southern Oil Co., which originally held the principal acreage on the structures named, completed a deal a few weeks ago whereby it took over the field equipment and holdings not already owned except for a small interest retained by the affiliated Midwest companies. The leaseholds acquired aggregate 20,000 acres. The deal included a half interest with the Utah Southern in the Cane Creek well which was drilled to 5,000 feet by the Midwest Refining Co., and which is now being tested at the 2,028-foot horizon by the Utah Southern Oil Co. Mr. Jones will continue as a director of the Utah Southern.

A new company is being formed by Mr. Jones and associates to take over the interests. Plans provide for two flank wells to test the salt dome theory as applied to the structures in question. One of these will be located on the northeast flank of the Cane Creek structure. Several tentative locations are being considered and one of these will be decided upon within a few days and work will be started on the new test at once. The other test will be drilled on the east flank of the Salt Valley anticline. Jones and associates have made a contract with the Utah Southern for the drilling of the tests by the last-named concern.

Cane Creek Dome

The Utah Southern Oil Co.'s No. 1 Frank Shafer, Section 6-27-21, on the Cane Creek Dome, has not yet resumed the test of the horizon at 2,028 feet following the favorable results during the first few days. The first pumping test showed water only and then oil commenced showing, the quantity of oil increasing to 18 per cent and then 32 per cent when gas pressure interfered with pumping. The tubing was pulled and a new hookup arranged with a view to diverting the gas. After being idle four days, pumping was resumed but owing to new difficulties, it continued only four hours, during that time the test showed approximately the same percentages of oil and water as when the first test ended, though the well had been shut down for four days. The oil coming out with the water is not cut, but is a good grade of live oil. This is accepted as a favorable indication that the oil is not coming from a pocket, but through a fissure in the salt beds for otherwise it would become emulsified. One of the mechanical difficulties being encountered is from the precipitation of salt by the gas which has a tendency to choke up the channels made by the fluid. The well shows a rock pressure of 325 pounds. The fluid is recovered through a perforated 6¼-inch casing, and part of the horizon is shut off by the 8¼-inch. It is probable the two casings will be shot off at the horizon being tested to permit a freer movement of the oil and water.

Elk Ridge Failure

Utah had another failure this week in the Midwest Exploration Co.'s No. 1 Hughes, Section 30-34-19, on the Elk Ridge Dome in the La Sal National forest, in San Juan County. Drilling was suspended at 4,422 feet in mica schist or granite formation. It will be abandoned as soon as approval is obtained from the United States Bureau of Mines. The test went through several thick sands in the lower Pennsylvanian, but none showed anything of consequence. It has not yet been announced whether another test will be drilled. The structure is one of the largest in the Rocky Mountain district and has 150,000 acres within the closing contour. A number of the major companies owned leases and permits on the structure and contributed towards the cost of the test. It was predicted this structure would become either one of the biggest oil fields in the country or be a total failure.

The location of the test to be drilled on one of the several structures in the Nequoia arch by the Phillips Petroleum Co. was announced this week. It is in the center of the NE of Section 16-27s-16-, in Wayne County. Rig moved from its abandoned test in El Paso County, Colorado, is being erected. The first objective horizon is the Shinarump conglom-4,300 feet. The structure was geologized and mapped by H. W. C. Prommel and H. E. Crum.

The Embar Oil Co.'s No. 1 Big Six, Section 34-25-21, on the Moab anticline, the pioneer well in that region, is drilling ahead slowly at 4,665 feet in sandy lime with wet gas showing. The hole has been reduced to 3 inches and only a few feet per day can be made.

Colorado

The Northeastern Colorado Oil Co.'s No. 1 State, Section 36-8n-55, on the Willard structure in Logan County, in northeastern Colorado, is so far proving a disappointment, though it still is drilling after having gone through a sand believed to be the Muddy, or first sand, in the Dakota series. This sand was topped at 5,207 feet and was 23 feet thick. It showed neither oil, gas nor water. The first 5 feet at the top was reported to be soft and brown in color. The lower part was hard and tight. The hole went back into shale at 5,230 feet, and still was in shale streaked with sandy shale at 5,282 feet when drilling was suspended to lower the 4½-inch casing to bottom. It will be carried down, according to present plans, to the Dakota and Lakota, if possible. The test is the first in that area to reach the Dakota and reveals the depth at which that horizon may be found.

Previous to the drilling of this well, the depth had been estimated at more than 7,000 feet by more than one authority. These estimates were, however, generally qualified as it was not possible to determine to what extent the overlying beds thinned as they dipped away from the

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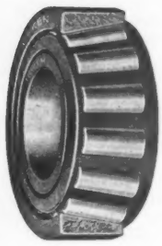

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mountain range. The well is about 90 miles east of the Wellington-Fort Collins Field in Larimer County. Between the two districts there is a fold called the Fort Morgan anticline upon which are several known structures where drilling is not expected to be so deep. The fold runs through the center of Morgan County down into Washington County. The Willard Dome test commenced spudding October 24, 1926, and the record made is considered a very good one. The Empire Gas & Fuel Co. is said to have contributed towards the cost of the well and had a geologist on the ground most all of the time drilling was in progress.

The Detroit Oil Association's No. 1 Olbert, Section 9-35-12, on the Thompson Park structure, in La Plata County in the southwestern part of the state, was reported this week to have encountered a sand at 1,375 feet and to have found it water bearing. A string of 6⅝-inch casing will be run to make a shut-off and drilling will be continued. This test started in the Mancos shale and the Dakota was expected at 1,300 to 1,500 feet. Apparently, the sand found was one of the Dakota series. It had a show of oil at 820 feet and another, estimated at 6 bbls., at 1,057 feet.

Hiawatha Gasser

The Ohio Oil Co.'s No. 1 Kuykendall, NE SE Section 22-12n-100, on the Hiawatha, or Wilson Creek, Dome, in the northern part of Moffat County, is reported to have topped a sand at 1,996 feet and to be making approximately 35,000,000 feet of gas at 2,000 feet. A later report is to the effect that the flow has increased to 55,000,000 feet. The gas will be diverted and drilling continued in hopes of encountering oil in a lower formation. The operation is of more than ordinary interest since the gas is supposed to be coming from the Wasatch formation of the Tertiary age. The location is approximately half a mile east of the Somir Petroleum Corp.'s No. 1 Wilson, (heretofore known as the W. T. Morris well) on the SW NE of Section 22-12-100, which came in October 2, 1926, at a depth of 2,220 feet with a flow of 58,000,000 feet of wet gas. No. 1 Wilson cut a sand at 1,600-25 feet which made 2,000,000 feet of gas, and another at 2,025-35 feet which made 20,000,000 feet. When the big sand was encountered, the pressure was too great to continue, and the well was shut in. Since then it has been showing some green oil around the fittings and, when opened up, gives an oil coating to the derrick. There is some question as to whether the gas from the two lower horizons is from the Tertiary, or some older horizon, but cuttings from one of the wells now drilling are expected to throw some light on the subject. It is contended by some geologists that the Tertiary was much thinner than expected and that the drill had actually entered the Lewis or Mesa Verde shale. This structure is expected to furnish part of the gas for the projected line from the Baxter Basin Field in Wyoming to Salt Lake City.

The Hiawatha area is also being tested in the Reiter-Foster Oil Co.'s No. 1 State, SE SE Section 16-12-100. This well is lower on the structure than the gassers and the operators are hopeful it will miss the heavy gas pressure and pick up an oil sand. It is now drilling at 1,985 feet, and has probbaly 100 to 200 feet to go to reach the big gas sand. It is through one of the upper sands which showed some gas. The Somir Petroleum Corp.'s No. 1 Wilson is about 1 mile south of the Wyoming line. This company has made locations on the Newberry permit SE SE Section 13-12-100, and on the Wiff Wilson permit in the SE cor. Section 24-12-100. On the Wyoming side, the Prairie Oil & Gas Co.'s No. 1 Tucker, C NW SE Section 18-19-99, in Sweetwater County, Wyoming, is drilling below 500 feet on one of the several structures known as the Alkali Creek Dome. The Vermillion Oil Syndicate of Denver has made a location in the SW cor. Section 16-12-99, on the Wyoming side, 3 miles north of the discovery.

Jackson County

In Jackson County, the Continental Oil Co.'s No. 1 Hoye, Section 34-9n-78, is reaching an interesting depth at 3,990 feet and carrying the 8¼-inch close behind the tools. This test is on the South MacCallum Dome, which lies immediately south of the North MacCallum Dome upon which is located the company's freak well making high-grade crude with carbon dioxide gas. The Carter Oil Co. drilled on Section 27-9-78 in 1922 and abandoned the hole in a water sand at 3,962 feet. The hole had been reduced in size so that it would not be carried any deeper. It is now believed the Carter well did not reach the Dakota, but stopped in the Frontier. The Continental well probably will not have very much farther to go, but no predictions are being made. The reason for this is that the beds in the discovery well on the north dome proved to be much thicker than expected, and until drilled, there must remain a doubt as to their thickness on the south structure. The 8¼-inch will be carried just as deep as possible to give plenty of leeway for reducing the hole should cavy ground or water horizons be encountered. On the north structure, the Continental's No. 1 Pollack, Section 2-9n-79, is sidetracking 400 feet of 8¼-inch at 3,770 feet, with a total depth of 3,825 feet, and its No. 1 Peterson, Section 1-9-79, which changed back from rotary to cable tools at 3,635 feet, is drilling at 6,670 feet.

Larimer County

In Larimer County, the Five Square Oil & Gas Co.'s No. 1 State, SW SW Section 16-4n-69, is drilling in the Hygiene at around 200 feet. This test is three-fourths of a mile south and a little east of its No. 1 Fagin on Section 17, which is shut in as a gasser. The company has given a 90 days' option to R. L. Pattison of Ontario, Canada, on the gas from the structure, and it is expected an effort will be made to obtain a franchise to supply the town of Berthoud with gas. Plans also provide for the construction of an absorption plant as soon as the well now drilling is completed, provided it is a gasser. It is understood that $1,000 per month is being paid for the option. This operation is on the Berthoud structure which was drilled three years ago by the Midwest and abandoned below the Dakota after passing up good shows of oil and gas in the upper horizons.

The Union Oil Co. of California's No. 3 Buckeye, NW NW Section 31-10-68, on the Wellington Dome, which had water in the Muddy sand topped at 4,473 feet, is being deepened as a test of the lower horizons. It was drilled to 4,552 feet and put on the pump to see what would happen. It will be recalled that this company's No. 1 Plummer, Section 30-10-68, was a water well in the Muddy at 4,468-4,562 feet and pumped water for nearly a month. Then it began making 3 bbls. of oil with 500 bbls. of water. The quantity of oil continued to increase until nearly a year afterwards it averaged 432 bbls. of oil and 380 bbls. of water a day in a week's test and it still is one the best producers in the field. If No. 3 Buckeye does not repeat this performance, it will be carried down to the Dakota and possibly to the Lakota. The Union company's No. 6 Buckeye, Section 31-10-68, is drilling at 3,805 feet. and its No. 2 Foster, Section 30-10-68, is drilling at 1,420 feet.

Boulder County

In Boulder County, the Essok Oil Co.'s No. 1 Martin, Section 5-1s-70, on the Parallel Dome, is pulling its 4¾-inch casing, which was run to 5,135 feet, and will underream and lower the 6¼-inch to bottom. The total depth is 5,225 feet. On account of the ground being cavy it was doubtful if the Dakota could be reached in the smaller hole. It probably will be two weeks or more before new hole can be made and this means the test probably will not be completed for a month or more.

In Las Animas County, the Parker Club's No. 1 Adams, Section 32-34-56, near Branson, has set the 8¼-inch in a lime shale at 3,639 feet and is drilling ahead with a possibility of picking up a sand in the upper Pennsylvanian at almost any time.

Left Hand Oil Co.'s No. 1 Prechtl, Section 34-3n-70, in Boulder County, has not yet made a test of the 53 feet of Muddy sand from a total depth of 1,998 feet. The sand was saturated to the bottom, but water from above had not been successfully shut off. It was decided to run a string of 3-inch pipe and put in a packer so as to make a test, but this failed to work properly and another packer has been ordered. However, with a partial shutoff, the gas pressure increased and the well made several flows by heads. Every indication points to the well being a commercial producer as soon as it is in shape for a test. If this well is down on the flank, as appears probable, a new pool may be opened. The company is preparing to make another test, but will have some geological work done before deciding upon the location.

Moffat County

The Moffat County wells drilling for the Sundance continue to attract attention. The Texas Production Co.'s No. 17 Parkinson, NW SW Section 23-4-92, on the Iles Dome, furnished the principal surprise of the week. This well was supposed to have topped the Sundance sand at 3,485 feet, at which depth it made considerable gas and a few flows by heads. Previous to that time it had 2,000 feet of oil standing in the hole from the Morrison sand. The 4½-inch casing was run and cemented at 3,485 feet to shut off the Morrison. However, when drilling was resumed, it was found the hole was not yet in the Sundance, but this horizon was found at 3,500 feet. Drilling was continued to 3,517 feet, the sand being very hard and tight. Yesterday the well began flowing from between the 6¼-inch and the 4½-inch casings, making 30 bbls. an hour and 500 bbls. the first day. This oil, apparently, is coming from the Morrison. In addition, there is 2,600 feet of oil standing in the 4½-inch pipe, evidently from the Sundance sand. This makes the well look like a good producer from the Morrison, while deeper drilling is expected to result in picking up a better formation in the Sundance.

Midwest Refining Co.'s No. 34-SD Parkinson, SE SW Section 22-4-92, on the Iles Dome, southwest of the recent completions, encountered the Morrison sand at 3,052 feet. Two feet into the sand, it began making 10,000,000 feet of gas, this being the heaviest gas flow so far encountered in any of the wells. It is logging 46 feet higher, sea level measurement based on the Dakota, than the discovery well which had an initial production of 2,600 bbls. in the Sundance. The casing was cemented at 3,054 feet and as soon as it sets, it will be drilled into the Sundance. This well is about three-fourths of a mile southwest of the discovery.

Iles Dome Operations

Other Iles Dome operations show routine progress. Midwest Refining Co.'s No. 4-SD Shaw, NW NE Section 27-4-92, after mudding off gas in the upper Morrison, is ready to cement the casing at 3,195 feet. Same company's No. 8-SD Parkinson, NW NW Section 23-4-92, is completing rig. Shaffer Oil & Refining Co.'s No. 205 Yarg, NW NW Section 26-4-92, joint operation with the Yarg Producing & Refining Co., commenced spudding November 12. The 15½-inch casing is being run at 100 feet. The elevation of this well is 6,504 feet. Texas Production Co.'s No. 13 Parkinson, NE SW Section 22-4-92, has rig completed and is waiting for the completion of No. 17 before spudding. Same company's No. 6 Parkinson, NW NW Section 23-4-92, is drilling in shale at 1,115 feet. L. L. Keith's No. 1 Milliken, SW cor. Section 14-4-92, is rigging up.

On the Moffat Dome, the Texas Production Co.'s No. 10 Knowlton, Section

(Continued on Page 88)

ROYALITE NO. 7 ADDS 100 BBLS. TO TURNER VALLEY FIELD OUTPUT

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Nov. 19.—In the Turner Valley Field southwest of Calgary, Royalite Oil Co. No. 7, LSD 3, Section 13-20-3w5, got the producing horizon in the Madison limestone at 4,208 feet, with an apparent wet gas flow ranging from 2,000,000 to 5,000,000 feet a day. The wet gas is coming in spurts, the well partly freezing after the valves have been left open for a little time. The maximum flow is, apparently, increasing a little, and will probably reach 6,000,000 feet or better, with a potential wet gas recovery of 100 bbls. a day. All the tools have been taken out of the hole, which is being left open as much as possible to clear itself.

Royalite Oil Co. No. 6, LSD 16, Section 31-19-2w5, has resumed drilling with the rotary outfit at 3,114 feet, after several months' shut-down. Royalite Oil Co. No. 8, LSD 9, Section 12-20-3w5, is reported drilling in the Blairmore (Dakota) formation at 2,330 feet. Royalite No. 9, LSD 6, Section 13-20-3w5, is drilling in the Benton shales at around 1,000 feet. Royalite No. 10, NE, Section 12-20-3w5, which spudded in recently, has resumed drilling at 160 feet after cementing casing to shut off surface water.

Dalhousie Operations

Dalhousie Oil Co. No. 5, LSD 16, Section 30-19-2w5, is swabbing and drilling at 4,610 feet. At this depth the test has been carried approximately 100 feet below the crude oil horizon encountered in the Fernie shales. Dalhousie No. 6, LSD 10, Section 13-20-3w5, is installing a rotary outfit. The excessive gas pressure made it impossible to keep the cable tools in the hole. Casing has been cemented at the bottom of the hole at 4,517 feet, in the top of the lime. The well is rather unusual in that, despite the exceedingly heavy pressure, the actual gas flow is stated to be only about 500,000 feet a day.

Dalhousie Oil Co. No. 1, the old Southern Alberta No. 1 flowing well, LSD 4, Section 18-20-2w5, which is being drilled deeper, has cemented casing in the top of the Madison limestone at 4,357 feet. The test is now waiting for the diamond drill outfit, which was transferred to Royalite No. 7 a few weeks ago to complete that well in the Madison. The diamond drill is being left at the Royalite No. 7 for a few days, pending development following the wet gas strike in the Madison at 4,208 feet; as soon as it is definitely decided to go no deeper with Royalite No. 7, the outfit will be moved back to complete Dalhousie No. 1.

In the north end of the Turner Valley Field, Foothills Oil & Gas Co. No. 1, SW, Section 26-20-3w5, is at 3,425 feet and fishing for a twist-off.

On the Sinclair structure, in the southern foothills, Imperial Oil Ltd., Highwood No. 1, LSD 3, Section 36-18-3w5, is at 3,504 feet and running 8¼-inch casing.

Summary of Field

Completion of Royalite Oil Co.'s No. 7 adds a potential 100 bbls. to the production of the Turner Valley Field. The latest summary for the field shows the following figures.

Crude Naphtha

	Bbls.
Royalites Nos. 1 and 3	10
McLeod No. 2	50
Illinois-Alberta No. 1	100
Vulcan No. 1	100
Royalite No. 4	559
Royalite No. 7	*100
Home No. 1	*60
Light Crude Oil	
McLeod No. 3	40
New McDougall-Segur No. 1	45
New McDougall-Segur No. 2	80
Home No. 1	*40
Dalhousie No. 5	250
Total	1,434

*Potential.

Outside the Turner Valley Field, there

(Continued on Page 112)

Sulphur Mountain Field No Threat

Discovery in Ventura County Not Expected to Yield Large Production. Drilling in Long Beach to Be Carried as Deep as Possible

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., Nov. 19.—California chalked up another new field last week as a result of the development of commercial production at Sulphur Mountain in Ventura County, but, unlike the prolific fields of Los Angeles Basin, this new area does not hold out any promise of yielding large production. As a matter of fact, the Monterey formation prevalent in this area practically precludes the development of major production from a geological standpoint.

The discovery well at Sulphur Mountain was Geis & Bradford's No. 1 Sulphur Mountain in Section 21-4-22, which registered an initial of 100 bbls. daily from 1,997 feet. The oil is of a good grade, testing 28.1 degrees A.P.I., and while the discovery well was located in virgin territory the taming of this wildcat did not come as a surprise. Attention was directed to the possibilities of this area several weeks ago when preparations were being made for a production test. Mechanical trouble developed at the psychological moment, however, and it was not until a few days ago that an actual conclusive pumping test was concluded. Geis & Bradford have the entire probable structure tied up in one block and this feature, in addition to the fact that the settled production of these shallow wells should be around 25 bbls. daily, works against the development of large production. Future development will undoubtedly go ahead slowly, and hence the output of this new district during the next year should be relatively small. There is no questioning the fact that a fairly good production could be built up by large simultaneous drilling, as these wells can be expected to show a temporary initial of about 200 bbls. for a short period before declining to the settled stage, but this is not probable for the reasons cited above.

Race at Long Beach

The most important development work under way in California at the present time from a production standpoint is the wild race down to the prolific deep sand at Long Beach, where all indications point to a substantial increase shortly after the first of the year. New deep wells are becoming more frequent and the number of completions should continue increasing from now on until the big parade begins early in 1928. All indications point to the attainment of a daily production of perhaps 200,000 bbls. by this field before the present deepening campaign draws to a close. Long Beach, reflecting a settled condition, had been hovering around 93,000 bbls. per day for more than a year previous to the inauguration of the deep drilling now under way, but this recent development work has already added better than 15,000 bbls. to the field's output in a little over six weeks, with a lot more yet to come. The new production expected to come from Long Beach during the next year will naturally cause California's total output to show a very substantial gain, but the upward trend of state production curves will not be due to this field exclusively, as there are several other areas which may exert an appreciable effect on the total output. In addition to fields already proven up, there are several wildcat areas which look promising at present, and it seems almost a foregone conclusion that one or more new fields will be opened during the next 12 months, with the result that additional production may be anticipated.

The recently discovered field at Seacliff, about 6 miles west of Ventura, may also exert an appreciable effect on state production, and, based on the amount of new work already undertaken, it looks as though this field may be doing around 10,000 bbls. daily in February or March. The Pan American ran a water witch in No. 1 State, the discovery well, which has been making an excessive amount of water since completion, and with the point of intrusion believed to have been located, it is thought the corrective steps undertaken will remedy this condition. New work in this field is going ahead rapidly and many of the wells now being rigged up should begin making actual hole within a very short time. The Pan American has three new rigs going up under rush orders, while the Chanslor-Canfield Midway Oil Co. is offsetting this company with four derricks on Hobson Lease C. The General Petroleum is credited with three rigs in course of construction, with the Associated and Shell scheduled to get under way on their respective leases. The General Petroleum ran up against a peculiar condition after it had hauled in material to drill its first well out in the open ocean just beyond the low tide line during the past week. A pile driver and material had been hauled out on the beach under rush orders, but work was summarily stopped by A. L. Hobson, who refused to allow the company's employes to cross his property to gain access to their location. The General Petroleum appealed to the Federal Court for assistance, however, charging that gunmen were forcibly prevnting its officials and employes from entering a state lease covering tidelands obtained from the surveyor general of the State of California. Judge Paul J. McCormack issued a temporary restraining order to cover the situation pending an order to show cause why a permanent injunction should not be granted. Edith H. Hoffman; Effie S. Hobson and A. L. Hobson, claimants to a tiny strip of land over which the General Petroleum's employes have been attempting to pass, were named as defendants.

Long Beach

With six new deep sand wells scheduled for completion within two or three weeks, the Long Beach Field will begin to reflect deep drilling in a concrete way, and although the daily production of this district is already up 15,000 bbls. since October 1, this is only an introduction as to what may be expected during the next six or eight months. Most of the wells which have accounted for this increase were projects started several months ago by operators who anticipated the present deepening campaign, although there have been several former upper zone producers redrilled and deepened since the present movement was inaugurated. Drilling operations at Long Beach began increasing several months ago, although there was no general campaign undertaken until after Seal Beach started falling off following its last high late in September. New work and redrilling jobs have increased tremendously during the past three or four weeks and a further gain will be recorded during the next several months. The new wells being started are not expected to reach the pay until late in January or early in February, at which time Long Beach production can be expected to show a substantial increase. There are quite a number of wells already under way, however, which should be finished in the interim, and the output of this field should continue its upward climb practically uninterrupted until the new flush sets in.

As Deep as Possible

There seems to be a definite tendency to drill as deep as possible in this field, and this exploratory work has already carried several potential producers below the 6,000-foot level. E. B. Campbell, who finished his No. 1 Long Beach last week doing 4,000 bbls. daily from 6,010 feet, was the first to seek production below this point, but since that time H. R. McMillan has gone down to 6,075 feet, and the California Eastern is still making hole at 6,035 feet. The California Eastern, incidentally, formulated plans a few days ago which contemplated an aggressive deepening campaign. No. 7 Marine has just been taken off production preliminary to being carried down to the lower horizon. The company is also put-

(Continued on Page 119)

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well, location—	S-T-R	Depth	Status
Associated, No. 1 Cypress, Potrero	34- 2-14	5,044	deepening
Smith & Carpenter, No. 1 Smith	35- 2-14	5,282	rebuild. rig.
Hurst Oil Corp., No. 1 Inglewood, Los Angeles Co.	28- 2-14	3,772	suspended
Mont. Park Oil Co., No. 1 Browning, Mont. Park.	26- 1-12	3,020	little showing
Associated, No. 1 Patterson, Pico	13- 2-12	1,841	congl. drilling
Circle Oil Co., No. 1 Pomeroy, Manchester	23- 3-14	4,280	suspended
Shell, No. 1 Mission, San Fernando	4- 2-15	4,472	little showing
Sou. Calif. Drlg. Co., No. 1 Matteson, El Segundo	1- 3-15	4,870	suspended
Carr, O. K., No. 2 Foster, San Juan Capistrano	13- 8- 8	4,230	hd. sd. drilling
Thomason & McCoy, No. Rinz, Saugus	27- 5-16	1,610	suspended
Southwest Pet., No. 1 Ramsauer, Watts	4- 3-13	4,198	sd. sh. drilling
San Clemente Oil Co., No. 1 Peck, Hawthorne	20- 3-14	5,390	to test
O'Donnell, J. E., No. 1 Dupree, Hawthorne	29- 3-14	5,304	suspended
White Behr, No. 1 Watson, L. A. County	21- 4-14	1,735	set 11-inch
Shell, No. 1 Allec, Placentina	31- 3- 9	4,892	hd. sd. drilling
Standard, No. 1 Olive, Orange Co.	17- 4- 9	4,670	hd. sd. drilling
Son. C. A., No. 1 Pinkerton, Orange Co.	5- 5-11	3,498	sd. sh. drilling
Ohio Oil Co., No. 1 Bolsa Doomar, Orange Co.	35- 5-11	3,770	hd. sh. drilling
Stein, Leo, No. 1 Long, Orange Co.	21- 5-11	4,610	hd. sd. drilling
Shell, No. 1 Stern, Orange Co.	22- 3-10	1,180	hd. sd. drilling
Standard, No. 1 Rindge, Palms	36- 1-15	Rig	in litigation
Hemet Pet. Co., No. 1 Ward, Riverside Co.	9- 5- 1	1,650	hd. sd. drilling
Fuller & Gray, No. 1 Puente, L. A. County	14- 2-10	Rig	rigging up
Anchor Oil Co., No. 1 Hudson, Los Angeles Co.	19- 2-10	2,395	suspended
Pet. Securities, No. 1 Newport, Orange	3- 6-10	2,809	sd. sh. drilling
Olympic Refg. Co., No. 1 Sunset Beach, Orange Co.	.....	.....	location
Turner, S. S., No. 1 Escondido, San Diego Co.	.....	Rig	rigging up

IMPORTANT NORTHERN CALIFORNIA WILDCATS

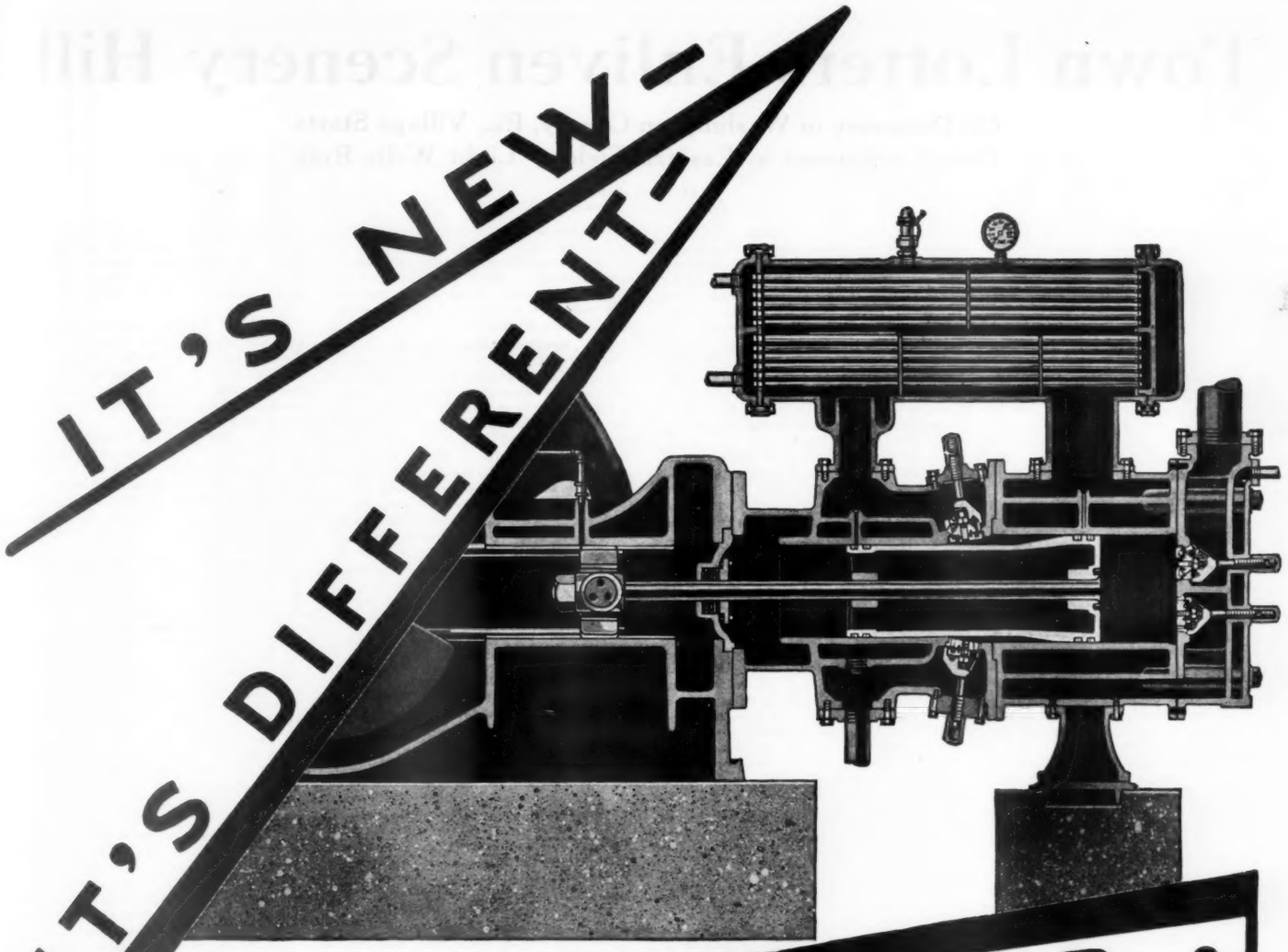
Associated, No. 1 Smith, Kettleman Hills	12-23-18	2,043	suspended
Bolsa Chica, Well No. 1, Kettleman Hills	30-23-19	3,502	suspended
General Pet., No. 1 Burbank, Kettleman Hills	30-23-19	3,105	pipe bad
General Pet., No. 2 Oschener, Kettleman Hills	26-22-18	5,299	bl. sh. drilling
General Pet., No. 1 Dome, Kettleman Hills	4-24-19	3,800	suspended
South Coalinga, Well No. 1, Kettleman Hills	35-24-19	2,930	pipe trouble
Monocline Dev. Co., Well No. 1, Kettleman Hills	7-21-21	3,401	sd. sh. drilling
McPhail, Hugh, Well No. 1, Kettleman Hills	13-24-18	2,160	hd. sd. drilling
Milham Expltn., No. 1 Kettleman, Kings Co.	2-22-17	5,427	br. sh. drilling
Shell, No. 2 Berlywood, Moorpark	32- 3-20	6,043	hd. sd. drilling
Star Petroleum, No. 2 Canet, Ventura Co.	13- 3-23	2,914	hd. sd. drilling
Continental Oil Co., No. 1 Burnham, Ventura Co.	22- 5-18	3,298	hd. sd. drilling
Standard, No. 1 Camarillo, Ventura Co.	29- 2-20	5,680	sd. sh. drilling
Petroleum Sec., No. 1 Diablo, Ventura Co.	26- 5-18	3,397	gr. sd. drilling
Parkford, E. A., No. 1 Strathern, Ventura Co.	5- 2-18	4,002	hd. sd. drilling
Shell, No. 1 Strathern, Ventura Co.	6- 2-18	Rig	rigging up
Geis & Bradford, No. 1 Sulphur Mtn., Ventura Co.	21- 4-22	1,997	100 bbls.
Miller Oil Co., No. 1 Red Mountain, Ventura Co.	7- 3-23	980	suspended
Richfield, No. 27 Piru, Ventura Co.	35- 5-18	1,902	suspended
Milham Explrn., No. 2 Buttonwillow, Kern Co.	8-28-23	4,662	gas well
Milham Explrn., No. 3 Buttonwillow, Kern Co.	7-29-24	4,150	suspended
Pacific Eastern, No. 1 Fruitvale, Kern Co.	21-29-27	2,916	gr. sd. drilling
Pacific Eastern, No. 1 Bakersfield, Kern Co.	6-30-28	4,503	testing
Barnes, L. S., No. 1 Stine, Kern Co.	11-30-27	...	location
General Pet., No. 1 Edison, Kern Co.	5-30-29	4,009	looks good
Getty, George F., No. 1 Edison, Kern Co.	22-29-29	3,522	gr. sd. drilling
Midway Northern, No. 1 Edison, Kern Co.	29-29-30	Mtl.	building rig
Union, No. 1 Mon Bluff, Kern Co.	28-27-28	Rig	rigging up
California Pet., No. 1 Adobe, Kern Co.	25-27-28	1,219	gr. sd. drilling
Shell, No. 1 Mon Bluff, Kern Co.	3-28-28	3,047	fishing
Superior, No. 1 McFarland, Kern Co.	11-26-27	Rig	rigging up
North American, No. 1 Wallace, Delano	5-25-26	3,703	br. sh. drilling
Fresno Madera Oil Co., No. 1 Clovis, Fresno	18-12-21	3,830	hd. sd. drilling
Barneyberg Oil Co., No. 1 Brown, San Luis Obispo	25-32-14	2,205	hd. sd. drilling
Richfield, No. 1 Wreden, San Luis Obispo Co.	10-29-17	1,648	hd. sd. drilling
Miley Ex. Co., No. 1 Carissa, San Luis Obispo Co.	15-29-17	Rig	rigging up
Union Oil Co., No. 1 Huasna, San Luis Obispo	34-32-15	Rig	rigging up
Shell, No. 1 Cowell, San Mateo Co.	8- 6- 5	4,993	hd. sd. drilling
Shell, No. 1 Murphy, Petaluma	29- 5- 6	6,385	hd. sd. drilling
Shell, No. 2 Murphy, Petaluma	8- 5- 6	1,960	hd. sd drilling
Thomas & Hammill, Well No. 1, Alameda Co.	16- 3- 3	1,470	suspended
Buttram, F. W., No. 1 Odin, Santa Barbara Co.	20-25-27	929	sd. drilling
Elliott & Clarke, No. 1 Marcos, Santa Barbara Co.	3- 6-29	2,998	br. sh. drilling
Gorham, G. O., No. 1 Orcutt, Santa Barbara Co.	33-10-34	Mtl.	building rig
Becker, G. F., No. 1 Summerland, S. Barbara Co.	33- 4-25	3,060	shut off N. G.
Twin State, No. 1 Modoc, Santa Barbara Co.	.....	Rig	rigging up
Birch Oil Co., No. 1 Porterville, Tulare Co.	13-20-26	2,315	hd. sd. drilling

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Crude oil	215,429	30,776	.....	.....	8,777,164	10,223,618
Fuel oil	.....	.....	81,929	11,704	6,716,619	6,292,335
Diesel and gas oil	.....	.....	75,163	10,738	2,303,789	2,866,579
Gasoline	144,199	20,600	78,104	11,158	7,774,848	6,078,860
Tops	.....	.....	.....	.....	.....	374,504
Coastwise—						
Crude oil	341,425	48,775	428,071	61,153	20,996,307	20,437,076
Fuel oil	349,490	49,927	248,967	35,567	11,094,337	9,792,065
Diesel and gas oil	159	23	18,131	2,590	341,207	158,835
Gasoline	272,908	38,987	273,830	39,119	8,452,400	6,571,227
Kerosene	17,374	2,482	9,802	1,257	221,684	168,179
Tops	66,980	9,594	.....	.....	219,255	501,520
Exports—						
Crude oil	12,013	1,716	48,125	6,775	2,074,890	3,597,698
Fuel oil	576,338	82,334	438,088	62,584	24,426,564	15,558,097
Diesel and gas oil	9,110	1,301	138,008	19,715	1,247,149	532,630
Gasoline	84,994	12,142	148,428	21,204	4,433,037	4,056,555
Tops	.....	.....	.....	.....	227,204	141,467
Kerosene	69,078	9,868	62,045	8,864	1,894,871	2,638,763

TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC, GULF COAST PORTS

Fuel oil	.....	.....	.....	.....	.....	78,653
Diesel and gas oil	91,422	13,060	.....	.....	762,762	1,522,660
Gasoline	90,473	12,925	75,476	10,782	1,850,487	853,312
Tops	.....	.....	.....	.....	.....	73,698
Lubricants	.....	.....	.....	.....	370,180	407,860
Coastwise—						
Fuel oil	.....	.....	132,481	18,926	4,380,219	4,904,895
Diesel and gas oil	8,101	1,157	.....	.....	216,590	.....
Gasoline	62,357	8,908	.....	.....	4,483,815	4,051,378
Kerosene	10,248	1,464	.....	.....	208,491	301,764
Export—						
Fuel oil	75,118	10,017	.....	.....	2,325,820	2,863,280
Gasoline	228,825	32,689	16,729	2,390	2,613,032	1,686,183
Kerosene	77,381	11,054	55,029	7,861	897,155	1,879,829
Lubricants	.....	.....	4,125	589	26,695	66,706



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Town Lotters Enliven Scenery Hill

Oil Discovery in Washington County, Pa., Village Starts Only Excitement in Eastern Fields. Light Wells Rule

By D. S. Wakenight
Staff Correspondent, Eastern Fields

PITTSBURGH, Pa., Nov. 21.—The eastern fields since last reviewed have been very quiet, completing only a few wells better than the average size and all in the deep sand territory in southeast Ohio. In no section of the east is there any important new work starting.

All under way is scattered over a wide area and inside of defined limits. The hope for finding strictly new producing territory has been almost entirely abandoned. It is quite certain that there will be little doing along that line during the winter months.

The gas companies are showing increased activity in anticipation of the increased demand during the winter months. The southwest counties in West Virginia are receiving attention. From these counties will be received the major portion of the needed gas. Raleigh County is known to hold gas deposits, but so far there have been no pipe lines to carry it to a market. Some of the larger gas companies assert the supply available will be ample to meet the demands during the coming winter.

Best Completions for the Week

In the northwest quarter of Section 16, Jackson Township, Guernsey County, the Ohio Fuel Supply Co. has completed in the Niagara Lime a test on the Charles Wigginton farm. It produced 100 bbls. the first 24 hours after being drilled into the pay. In the southeast quarter of Westland Township, same county, the Leonard Oil & Gas Co.'s No. 4 on the James Joyce & Co.'s farm produced 50 bbls. the first 24 hours after shot in the same formation.

Licking County

In Section 14, Hanover Township, Licking County, the Hope Construction & Refining Co.'s test on the A. W. Howell farm produced 75 bbls. the first 24 hours after being shot in the Clinton sand.

Late Completions

At the close of the week of development work the Southeast Ohio fields completed nothing better than very light wells and more dusters than producers.

One-half mile southwest of Beebe, Section 12, Rome Township, Athens County, O. C. Dunn has completed No. 16 on the A. C. Finterwald farm and showing for a light pumper in the first Cow Run sand. Two miles southwest of Broadwell, Section 12, Rome Township, E. D. Smith and others have a duster in the same formation at a test on the A. J. Lafferty farm. In the same section and township, E. D. Smith and others have completed in the first Cow Run sand a test on the A. J. Lafferty farm and is dry and abandoned. In Section 9, Monroe Township, Coshocton County, the East Ohio has completed a test on the D. & M. Mohler farm. It is dry in the Clinton sand and has been abandoned.

In Section 21, Fallsbury Township, Licking County, the Leonard Oil & Gas Co. has completed in the Berea grit No. 21 on the Myers Heirs' farm. It is good for 10 bbls. a day. On the west side of Section 31, Sutton Township, Meigs County, Koehler & Miller have completed in the Cow Run sand No. 4 on the Daniel Handashelt farm. It is a very light pumper, good for less than 1 bbl. a day.

In Section 24, Wayne Township, Monroe County, the Sylvania Producing Co. has completed No. 6 on the E. F. Given farm and good for 2 bbls. a day in the Berea grit. In Section 24, Reading Township, Perry County, Scott Wilson & Co. have a duster at a test on the G. W. Folk farm. In Section 30, same township, Bowman and others have started to drill a test on the P. Hutchinson farm. In Section 24, same township, the Hutchinson Oil & Gas Co. is drilling another test on the C. F. Hutchinson farm. In Rush Creek Township, Section 14, Ruff Stuart & Co. are drilling in the sand on the J. C. Grove farm. In Section 24, Salt Lick Township, Perry County, Craig, Adair and others are drilling a test on the Harry Tharp farm. In Section 34, Coal Township, the Hope Construction & Refining Co. is due in the Clinton sand at a test on the Eli West farm.

In the northeast quarter of Section 11, Westland Township, Guernsey County, the Leonard Oil & Gas Co.'s No. 4 on the James Joyce & Co.'s farm has been drilled into the Niagara lime and good for 50 bbls. a day.

Gasser in Perry County

In the northwest quarter of Section 19, Harrison Township, Perry County, Perry Sturm and others have drilled a test on the William Rousch farm into the Clinton sand. It is a gasser good for 2,500,000 feet. In the northeast quarter of Section 35, Washington Township, Hocking County, the Riggs Oil & Gas Co.'s test on the A. S. Riggs farm is a duster in the Clinton sand. In the southwest quarter of the same township and county, the Gordon Oil Co. had the same kind of luck at a test on the Henrietta Horn Heirs' farm. On the south side of Newark Township, Licking County, the Wehrle Co. is drilling a test on the W. W. & A. T. Wehrle farm.

In Section 2, Athens Township, Athens County, the Wehrle Co. completed in the Berea grit a second test on the Charles H. Maxwell farm. It is a light pumper not good for more than 2 or 3 bbls. a day.

In the northwest quarter of Section 26, Sutton Township, Meigs County, the Dailey Oil Co. has completed a second test on the Giles Hybell farm. It is a duster in the Berea grit. In Sailsbury Township, the Ohio Fuel Supply Co.'s test on the Lafe Williamson farm is a duster in the same formation.

Light Wells in Washington County

In Warren Township, Washington County, Norwood Johnston & Co. have completed No. 70 on the Halmer Heirs' farm. It is a 2-bbl. pumper. In Muskingum Township, same county, the Miracle Oil Co. has the rig completed for a second test on the C. H. Caldwell farm.

In Newport Township, Washington County, O. S. Reckard has a 4-bbl. pumper at No. 4 on the F. F. Dana farm. In Section 2, same township, W. J. Todd & Co. have a 5-bbl. pumper in the Keener sand at a second test on the J. A. Reynolds farm.

The southeast Ohio fields completed light pumpers in shallow sand territory. When a well comes in better than the average it is nearly always in some part of the deep sand territory.

In Lot 61, Athens Township, Athens County, the Athens State Oil & Gas Co. completed in the Berea grit No. 8 on the Ohio State Lands and is good for 5 bbls. a day. In the Fisher Pool, Alexander Township, J. A. Ronshausen and others have completed in the salt sand No. 3 on the J. A. Cassels farm. It is a light gasser.

In Lot 6, Section 16, Chatham Township, Medina County, the O. K. Oil & Gas Co. has completed at 340 feet, No. 15 on the T. W. Brinker farm. It produced 30 bbls. the first 24 hours after being shot and is the best producer ever completed in that section. In Lot 10, same section and county, the same company has completed No. 26 on the Sanford-Watson farm. It is a light pumper.

Duster in Hocking County

In the northeast quarter of Section 9, Green Township, Hocking County, Columbus men have drilled a second test on the A. Ralston farm through the Clinton sand and dry. They have plugged the hole to the bottom of the Berea grit and will endeavor to recover the gas developed in that formation.

Southwest Pennsylvania

In Perry Township, Greene County, the Carnegie Natural Gas Co.'s second test on the Alice Henderson farm is a gasser in the 50-foot sand. In Morris Township, the same company's test on the J. D. Patterson farm is a duster. In Aleppo Township, the Dumbar Oil & Gas Co.'s No. 4 on the Grim-King farm, an old well, has been drilled deeper and is dry in all sands. It has been abandoned. In Jackson Township, Milligan & Hoskinson's test on the W. L. Sellers farm is a gasser in the Gordon sand.

In Morris Township, Greene County, the Manufacturers Light & Heat Co. has a duster in all sands at a test on the Daniel Iams farm. At Scenery Hill, West Bethlehem Township, Washington County, there is a little local excitement. The Carnegie Natural Gas Co. has a gasser at a test on the J. S. Hunter farm. In this development there are seven wells drilling and several locations made for tests. There are a number of the wells drilling due in the sand.

The only stir in the Southwest Pennsylvania fields is in Scenery Hill, West Bethlehem Township, Washington County where a town lot development is in full swing, occasioned by local men drilling in a fair producer more than a month ago. All of the adjacent lots were speedily leased and more wells are now drilling. The Carnegie Natural Gas Co. is drilling at 1,200 feet on the White Kinder farm. Fletcher & Moore are drilling at 1,790 feet on Scenery Hill, Lot No. 2. Roy Fletcher & Co. are drilling at 1,590 feet on Lot No. 31. Doctor Riter and others are drilling at 2,000 feet on Lot 42. Roy Fletcher & Co. are drilling at 2,200 feet on Lot 22. Fasinger & Jordan are drilling at 1,500 feet on the Harriett Hess lot. Benesum & Trees are drilling at 2,300 feet on the R. F. Hill farm, all located in West Bethlehem Township. In addition to the foregoing several rigs are building and locations made.

On Montour Run, Robinson Township, Allegheny County, Getty & Purdy have drilled a test on the Speer farm into the 100-foot sand and showing for a 4-bbl. pumper. It will be drilled deeper. On the McKee farm, adjoining the Speer, M. Makovitch is building a rig.

West Virginia

In Clay district, Wetzel County, the Carnegie Natural Gas Co. has drilled old No. 1 on the James Wade farm through all lower sands and dry. In Center district, J. W. Moorhead & Co.'s test on the Grim Heirs' farm is now through all lower sands and is a light gasser.

In Birch district, Braxton County, the Philadelphia Gas Co. has a gasser in the Big Injun sand at a test on the C. R. Bourne farm.

Smith & Starcher's test on the C. W. Starbher farm, in Lee district, Calhoun county, is a gasser in the Big Injun sand. In Center district, Park Bowser has drilled old No. 1 on the S. F. Richards farm to the Big Injun sand. It is a gasser. In Sheridan district, Martin Crawley has a gasser in the salt sand at a test on the Charles Basnett farm.

In Walton district, Roane County, the United Fuel Gas Co. has a gasser in the Big Injun sand at a test on the M. G. & N. M. Steele farm. In Smithfield district, Godfrey L. Cabot's test on the E. B. Harless farm is a gasser in the Big Injun sand.

In Glenville district, Gilmer County, the Pittsburg & West Virginia Gas Co. has completed a test on the H. C. Brinkley farm. It is a gasser in the Big Injun sand. In Southwest district, Doddridge County, S. M. Young's test on the W. H. McCloy farm is dry in the same formation.

In Grant District, Ritchie County, the Del Rio Oil Co.'s No. 4 on the Cornelia Storrs farm is a 10-bbl. pumper in the Big Injun sand. In Grant district, Pleasants County, Pugh & Floger have a 3-bbl. pumper in the Maxon sand at a test on the S. J. Sharp farm.

Henry district, Clay County, presents a fair producer, the first in several months. It is the South Penn Oil Co.'s No. 5 on the John Phillips farm. It is a natural producer good for 25 bbls. a day and is located 600 feet west of the Virginian Gasoline & Oil Co.'s No. 5 on the P. D. Summers farm.

In Jefferson district, Pleasants County, the Ambler Oil Co. has completed in the Squaw sand No. 6 on the Calvin Templeton farm. It is a duster.

Drilling Tests

In Carroll district, Lincoln County, W. C. Kingrey is due in the Big Injun sand on his own farm. In Duval district, Cameron & Co. have abandoned No. 1 on the Melissa Meadows farm. In Cabell County, Ortman & Shipe have started to drill on the William Robertson farm. In the same district, John Davidson has rig material at a location on the Lewis Watson farm. In Grant district, J. C. Zogg has started to drill on the T. J. Florence farm. In Scott district, Boone County, the Hope Construction & Refining Co. has started to drill on the M. F. Moore farm. In Jefferson district, Lincoln County, the Mud River Gas Co. has started to drill on the Elizabeth Adkins farm. In Duval district, the United Fuel Gas Co. is building a rig on the William Gillenrater farm.

On Grass Run, Ten Mile district, Harrison County, the Clarksburg Light & Heat Co. has drilled No. 3 on the Mary E. Bramer farm through the fourth sand and it is showing for a light pumper. In Bannister Hollow district, Kanawha County, the South Penn Oil Co. has cleaned out old No. 2 Bannister Heirs' farm. It will make a light pumper in the Squaw sand.

In Union district, Pleasants County, O. L. Morgan has completed in the Big Injun sand his test on the O. L. Morgan farm. It is dry.

Calhoun County

Within the past few months operations in Calhoun County have been increasing. In Lee district, the Calhoun Oil & Gas Co. has a rig up on the O. W. Groves farm. Kingsbury & Dollman have the rig completed for a second test on the L. L. Lynch farm. G. L. Cabot has a rig up on the Leona Nichelson farm. McIntosh & Scott have started a second test on the Amy Haymaker farm. In Sherman district, McCall & Co. have a rig up on the John Kelly Heirs' farm. In Sherman district, McIntosh & Miller have the rig completed for a second test on the A. Shock farm.

On Little Creek, Spencer district, Roane County, G. L. Cabot has started to drill a test on the Nettie M. Starr farm. On McFarlan Creek, Murphy district, Ritchie County, the South Penn Oil Co. is drilling No. 10 on the Anna M. Wilson farm.

In Sheridan district, Calhoun County, Godfrey L. Cabot has made a location on the Kauman-Oppenheimer farm. In Lee district, the Calhoun Oil & Gas Co. is drilling at 500 feet on the A. J. Nitz farm. In DeKalb district, Gilmer County, Satterfield & Co. have started to drill on the Frank Davis farm. In the same district, Charles Morris and others are rigging up on the Margaret Barker farm. In Clay district, Wetzel County, J. W.

(Continued on Page 108)

YOUNGSTOWN

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CONTINENTAL

Good Completions in Central West

Producers Reported in Indiana, Illinois and Ohio. Wildcat in Old Trenton Rock Area May Open New Territory

By Whit
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Nov. 21. — The old Lima Field of northwestern Ohio failed to register any new completions in the last week, although a few scattered ones should find the Trenton in the next week.

Important completions were made in the Central West. In Indiana a wildcat drilled on the Byron Shadle lease, near Twin Bridges, in Huntington County, in the outer edge of the old Trenton Rock Field of the Hoosier State, is reported good for 25 bbls., and is an inducement for further prospecting in that area. In the southwestern part of the State, in the Princeton section, in Barr Township, Daviess County, a slight extension was made to the McCracken Pool by the drilling in of an 8-bbl. initial producer on the Walker lease. A wildcat a few miles out from Greensburg, in Decatur County, on the Sowers lease, makes a gas showing at a shallow depth of 936 feet.

A test in Martinsville Township, Clark County, Illinois, on the Oral Covalt lease, Section 31, found production in the Kirkwood sand at 1,584 feet, good for 18 bbls.

In Monroe Township, Guernsey County, in the Central Ohio Field, some excellent gas volume is being developed in the second Berea sand pay on the Edinburn and Braniger farms, also in Addison Township, Gallia County, on the Mary Grover farm.

Indiana

New Development Likely

The most important of any of the recent wildcat venture in Indiana is the initial venture of Leo Wood on the Byron Shadle farm, near Twin Bridges, in Huntington County, in the old Trenton Rock area of the State. This well, while not large, indicates the opening of new territory for development. The test is estimated good for about 25 bbls. initial production. Huntington County lies north of Grant County and west of Wells County, two of the leading producing counties of the old field from away back in the early nineties. The second well has been started.

The next best completion comes from the Princeton district, in the southwestern part of the State, and in Washington Township, Gibson County, drilled by William Bell and others in a second attempt on the Frank Thompson farm, Section 6, where the sand was topped at 1,278 feet and the oil found at 27 feet in the sand at a total depth of 1,305 feet, the well having a production of 30 bbls. the first 24 hours. In the same township, the Ohio Oil Co. abandoned No. 1 on the J. W. Eads farm, Section 17, and also No. 1 on the S. R. Cunningham farm in Lot 117. H. C. Darby and others are putting down a test on the George Henring farm, Section 33, same township. In Center Township, same county, Joe S. Young, Jr., and others' No. 3 in the northeast corner of the J. L. Jenkins farm, in the NE of Section 13, was a dry hole at 1,390 feet. Griggs and others' test in the southeast corner of the John Hussey farm, in the SW of Section 12, proved a duster at 1,914 feet. Joe S. Young, Jr., and others are drilling No. 5 on the Margaret Hollingsworth farm in Section 13. In Patoka Township, the Ohio Oil Co. pulled out and abandoned No. 2 on the W. F. Knight farm, Section 2.

In Pike County, Madison Township, the Ohio Oil Co.'s No. 9 well, 520 feet from the north line and 250 feet from the east line of the N. B. Coffman farm, in the SE of Section 26, pumped 3 bbls. initial. It topped the sand at 930 feet, then drilled through 25 feet of sand and a 5-foot pocket to a total depth of 960 feet.

In Daviess County, Barr Township, Ruble and Collier's test on the Walker farm, which adjoins their production on the McCracken farm, found a 125-pound gas pressure and the well produced an initial of 8 bbls. In the same township, Phipps & Blosser drilled a dry hole in a test on the O'Brien farm. In Veale Township, Hartman and Sargent are drilling a second well on the Alonzo Veale farm, as well as No. 2 on the J. E. Peek farm, Section 28, while the Home Oil Co. is drilling No. 2 on the Wurtz farm.

In the southeast corner of Allen County, southeast of Fort Wayne, north of Adams County, and just across the state line from Van Wert County, Ohio, in the Trenton Rock area, unknown parties drilled a test near the town of Monroeville, on the Albert Leuenberger farm, getting a fair gas well at a depth of 1,410 feet.

The Murphy Oil Co.'s second well on the C. C. Cooper farm, Section 30, Harrison Township, Knox County, pumped an initial of 8 bbls. at 1,205 feet.

A gas showing was found in a wildcat Co., on the Stowers lease, 4 miles southdrilled by the Hoosier Public Utilities east of Greensburg, in Decatur County, at a depth of 936 feet. A heavy dose of salt water was found at 1,200 feet in a test on the William Steele, in Duck Creek Township, Tipton County, and near the town of Tipton and south of Kokomo.

No. 4 well on the Walter Bass farm, by the Brandywine Oil & Gas Co., near Morristown and north of Fairland, in Hanover Township, Shelby County, is said to show for a small producer.

In Boone Township, Harrison County, in the extreme southern part of Indiana, the Louisville Gas & Electric Co., drilled a gas well on the Daisy Lemmon lease, also on the Jones Agency property, while the well on the Bell Funk lease, was dry.

State Report

Oil and gas information from Indiana compiled by T. M. Kingsbury, state gas supervisor, Department of Conservation of Geology, Indianapolis, given in part by counties, follows:

Adams County—No reports of new developments in this area.

Allen County—A well drilled on the Albert Leuenberger farm near Monroeville in the southeastern part of the county, encountered gas at a depth of 1,410 feet. This well was shot with 60 quarts.

Daviess County—The best well to be brought in recently in this county is in the Cannelburg Field, Barr Township. It is on the Walker farm, just east of the McCracken farm, and was drilled by Ruble & Collier. It made an initial production of 8 bbls. and had a gas pressure of 125 pounds. Ruble & Collier have three wells on the McCracken farm. Those wells are shallow, being only a little more than 600 feet deep. Phipps & Blosser got a dry well on the O'Brian farm in this area. In Veale Township, Hartman & Sargent are drilling three wells south of Washington on adjoining farms where they now have several good wells. The wells being drilled are No. 2 Aden Gaither, No. 2 J. E. Peek and No. 2 Alonzo Veale. The Home Oil Co. is drilling No. 2 on the Wurtz farm and are down about 500 feet with a well on the Frank Emmrich farm which adjoins the Wurtz farm on the west.

Decatur County—The Hoosier Public Utilities Co., which is supplying Greensburg with natural gas, has completed a well on the Stowers farm, 4 miles southeast of Greensburg, which made 250,000 feet a day. The well is 936 feet deep.

Fountain County — The well on the William B. Coffing farm, Section 28, Troy Township, northeast of Covington is 2,468 feet deep and is shut down for orders.

Gibson County — Bell Brothers completed No. 2 Frank Thompson farm, Section 6, Washington Township, which encountered oil sand at 1,278 to 1,305 feet and made an initial production of 30 bbls. H. C. Darby and others are drilling No. 1 on the George Henring farm, Section 33.

Greene County—The Keystone Oil Co. of Pittsburgh is preparing to drill on the Ogle farm in the Goose Pond area, south of Linton. Part of the equipment is now on the lease.

Hamilton County—The Sheridan Oil & Gas Co. is drilling for gas on the Stephen Cox farm, in Jackson Township.

Harrison County—The Louisville Gas & Electric Co. has completed three wells in Boone Township. Those on the Jones Agency farm and the Daisy Lemmon farm produced gas while in the other on the Belle Funk farm, in the eastern part of the present field, was dry. These wells are from 600 to 700 feet deep. Mayhan is drilling in the Dogwood area and Ziegler is drilling his fourth well in this area, it being on the Joe Decker farm.

Huntington County — Leo Wood has completed a well on the Byron Shadle farm near Twin Bridges which is reported to have made an initial production of 25 bbls. Location for a second well in this vicinity has been made.

Knox County—Murphy Oil Co. is drilling on the C. C. Cooper farm, Harrison Township, brought in an 18-bbl. well at a depth of 1,205 feet.

LaGrange County—J. W. Hunt's well on the Ivo Chrystler farm, northwest of LaGrange, Clay Township, encountered 110-pound gas pressure at 895 feet. He has continued drilling for oil and at last report was down 1,050 feet.

Posey County—It is reported that the Lincoln Refining Co. will soon start a well on leases near Poseyville.

Shelby County—Another small oil well has been completed on the Walter Bass farm, near Morristown, in Hanover Township.

Spencer County — An important well has been completed on the Richard Phillips farm, near Gentryville, by the Premium Oil Co., which is reported to have made an initial production of 30 bbls. Pay sand was encountered at 1,214 feet. This company has started another well in this area on the Hoover farm.

Sullivan County—It is reported that 7,000 acres have been leased near Pleasantville, in Jefferson Township. In the Thomas Pool in the northwestern part of Fairbanks Township, W. T. Mellott and Whitlock are drilling on the W. Williams farm, Section 9, and Baldwig and Whitlock are drilling on the Charles Scott farm, Section 6.

Tipton County — The well drilled by Thomas Nash and T. E. Dean on the William Steele farm, Duck Creek Township, encountered salt water at a depth of 1,200 feet.

Illinois

There was a scarcity of completions in the Illinois fields. The most important one was Rhodes and Keith's test in the northwest corner of the Oral Covalt farm, in the SW of Section 31, Martinsville Township, Clark County, about 4 miles south and a little west of Martinsville and 5 miles east and about 2 miles south of Casey, near the division line of Martinsville and Casey Townships, and west of an old gas well drilled in the same

(Continued on Page 107)

100-BBL. WELL IS KENTUCKY'S BEST COMPLETION FOR THE WEEK

By Whit

BOWLING GREEN, Ky., Nov. 21.—This has been an off week for development work in Kentucky owing to cold weather and the election, which brought out everyone, including oil men, interested in politics.

The only well of importance was No. 1 on the Ollie Ezell 80 acres, to the northwest of the Ambrose Pool and between this rich pool and the Bell's Run area. In looking closely over developments it is found that much of the drilling is widely scattered, some far in advance of production and some a mile or so away from producing wells, the owners trying to extend the present producing pools in as many directions as possible.

Little wildcat work is being done in any part of the east half of the State, while in the western division work is as active as in any period during the past few months, both centered in the Tri-County fields of Hancock, Ohio and Daviess Counties, as well as in McLean County, which is a new addition to the producing sections. Allen and Warren Counties are doing but little new work and a slackness of new work is seen in the old Glasgow Field of Barren County. Clinton County, the most easterly portion of the western division has only one well under way, as in the case in Cumberland County.

Work over this field will be maintained until the heavy snows and bad roads come. Then development will slacken to a minimum, unless an advance is made in crude oil prices, a thing that is not probable, on account of the big production west of the Mississippi River.

Week's Work

A summary of the week's work in the Kentucky Field shows 13 completions, 8 producers with an initial production of 220 bbls., 5 dry hole and no gas wells. Compared with the previous week, there were 3 less completions, 1 less producer, 680 bbls. less production, 1 less dry hole and 1 less gas well. The wells were distributed by counties and districts as follows:

County—	Oil Comp.	Wells	Prod.	Dry	Gas
Ohio	8	7	200	1	0
Warren	2	1	20	1	0
Allen	2	0	0	2	0
Hancock	1	0	0	1	0
Total	13	8	220	5	0
Last week	16	9	900	6	1
Difference	3	1	680	1	1

Pipe Line Runs

According to the three pipe line companies handling crude in Kentucky that make their monthly reports, there was a total of 452,770.81 bbls. handled through the three systems in October. The runs from the eastern division totaled 221,335.40 bbls. for the four-week period from October 8 to October 29. The western division runs totaled 231,435.41 bbls., which does not include the runs of the Stoll Oil Refining Co. from the Barren County Field, which usually runs close to 15,000 bbls. monthly.

The runs of the Cumberland Pipe Line Co. for October amounted to 221,335.40

(Continued on Page 111)

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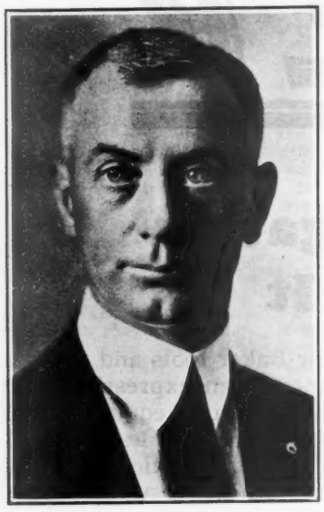

H. D. Easton

One of the outstanding authorities on the geology of the producing sections of northern Louisiana, lower Arkansas and the potential area of northeastern Mississippi and northwestern Alabama, is H. D. Easton, mining engineer and oil geologist with headquarters in Shreveport, La.

Mr. Easton has written important articles some of which have been published in The Oil and Gas Journal during the last few years as a result of his field studies on these areas.

Following the presentation of Mr. Easton's theory that the Cincinnati-Nashville arch affected the oil and gas possibilities of northeastern Mississippi, a structure was worked out which resulted in the discovery of the Amory gas field on October 5, 1926.

Upon graduating from Pennsylvania State College in 1905, Mr. Easton became the engineer and manager of several large coal companies. He then joined the School of Mines at the University of Illinois as instructor after which he was appointed professor of mining engineering at Kentucky State University. He was also a member of the Kentucky State Geological Survey while in that State. He was a member of the geological staff of F. Julius Fohs in Tulsa, Okla., and New York City.

Mr. Easton opened his present office in Shreveport, in June, 1921, as an independent oil geologist, and has devoted the last six years largely to the states of Louisiana, Arkansas, Texas, Oklahoma and Mississippi.

Besides his recent articles on the geology affecting these States, he wrote one on "Technology of Kentucky Clays," while a member of that State's survey.

Mr. Easton is a member of the Shreveport Chamber of Commerce which organization uses his services for inquiries in the absence of a state survey which Louisiana does not at present possess. He is a Shriner and a member of the American Association of Petroleum Geologists.

PERSONAL PARAGRAPHS

R. V. Hill is back in San Antonio, Tex., after a trip to New York City and Tulsa, Okla.

* * *

George Snedden, independent producer of Tulsa, Okla., was a San Angelo, Tex., visitor last week.

* * *

G. B. Davies, sales manager for the Louisiana Oil Refining Corporation, was in Chicago on business.

* * *

M. F. Gunby, geologist, with the Vacuum Oil Company, is in San Antonio, Tex., and it is understood will work out of that territory for a time at least.

D. L. Thomas of Oil City, Pa., special agent of the southern group of pipe lines, visited Pittsburgh last week.

* * *

H. H. Carson, of the Ajax Iron Works, Corry, Pa., is back in Tulsa, Okla., after a trip through Texas.

* * *

Philip S. Graver, vice president of the Graver Corporation of Chicago, is a Fort Worth, Tex., visitor.

* * *

Jacques Vinmont, president of the California Petroleum Corporation, left Los Angeles last week for New York.

* * *

Roy Butters, geologist, who has been in Colorado for several months is back to his home port at San Antonio, Tex.

* * *

Roger Sherman, Jr., president of the Sootless Spark Plug Co., Boston, Mass., recently visited the Mid-Continent.

* * *

W. H. Fehfenfeld, Baltimore, president of the Pittsburgh Pipe Line Co., was a business visitor in Pittsburgh, last week.

* * *

John Moran, for many years active in the supply business, is now with the American Tank Company of Oklahoma City, Okla.

* * *

P. J. White, Wichita Falls, Tex., operator, arrived in Shreveport, La., recently for a short stay at his winter home there.

* * *

D. P. Hamilton, of Shreveport, La., vice president of the Root Refineries, Inc., spent some time recently in Chicago on business.

* * *

J. R. Crawford, of Crawford & Sebastian, Shreveport, La., is a patient in a Shreveport hospital for treatment for a minor ailment.

* * *

John F. Burke, of Buffalo, N. Y., who has been interested in petroleum for many years, spent a few days at Tulsa, Okla., last week.

* * *

N. M. Christenson, is now Mid-Continent representative for the Staytite Company, of Houston, Tex., and is located at Tulsa, Okla.

* * *

Henry W. Davis, of Tulsa, Okla., representative of the New Bedford Cordage Company, is spending several weeks in the West Texas fields.

* * *

J. S. McCreary, of Okmulgee, Okla., has been in Southwest Texas arranging for some operations in Blanco County, north of San Antonio.

* * *

C. W. Bates, of Parsons, Kans., is in San Antonio, Tex., attending to some wildcat operations he will start around the first of the year.

* * *

A. J. Allspaugh, production superintendent for the Dixon Creek and McIlroy interests, left Amarillo, Tex., last Saturday for a visit with his parents in Pasadena, Calif.

* * *

E. L. Doheny was in San Francisco, Calif., recently where the Petroleum Securities closed a deal for an expansion program which will give the Pan American statewide distribution.

* * *

Erich F. Kuehnle, consulting petroleum geologist, of Houston, Tex., spent a few days in Shreveport, La., recently in connection with a reconnaissance of territory in southwestern Caddo Parish.

* * *

C. B. Stevens, of New York City, of Alworth-Stevens-Hild Oil Company which opened the Alworth Pool in Jim Hogg County, has recently been on a trip to the company's property there.

* * *

A. J. Ospring, Mid-Continent representative for Oakite Products, Inc., has just returned from New York, where he attended the annual conference of Oakite field men.

* * *

J. Zeppa, secretary-treasurer of the Natural Gas & Fuel Corporation, of El Dorado, Ark., is representing that organization on a tour of the industrial centers of the southeastern and south central states, promoted by the Camden, Ark., Chamber of Commerce.

Gray I. Morriss, manager of the Illinois plant of the American Radiator Company, industrial division, Springfield, Ill., has been visiting the Mid-Continent in the interest of this company.

* * *

R. F. Ryan, geologist, with the Vacuum Oil Company, who has been working in West Texas, was in San Antonio, Tex., recently for a few days on a trip back to the home office at Houston, Tex.

* * *

H. B. Lawrence, chief mechanical engineer of Henry L. Doherty & Company, was a Bartlesville, Okla., visitor recently, being entertained by R. W. Curran, general manager of the Bartlesville Gas & Electric Company.

* * *

Frank J. Stoltz, of New York City, recently elected president of the Houston Gas & Fuel Company, has been looking over the gas fields in the San Antonio territory and around Laredo and Corpus Christi, Tex.

* * *

J. M. Holliday, of Pittsburgh, Pa., vice president of the Transcontinental Oil Company, and Mr. Faunce, of the legal department of the company, visited the Shreveport, La., offices two or three days recently.

* * *

L. W. Browne, vice president of the Fisher Governor Company, of Marshalltown, Iowa, made a trip through the Oklahoma oil fields, and spent a day in conference with the Fisher distributors, the Smith Separator Company of Tulsa, Okla.

* * *

Joseph Jensen, who found the Potrero Field for the Associated Oil Company, probably does more traveling than any other official of the Associated company, as one-half of each week is spent in San Francisco and the other half in Los Angeles.

* * *

W. W. Orcutt, vice president of the Union Oil Company of California, headed a group of officials of the company which visited the West Texas oil fields in Winkler, Ector, Crane, Upton and Pecos Counties last week. They were en route to Fort Collins, Colo.

* * *

Clyde Alexander, vice president of the Phillips Petroleum Company, and several other Phillips officials inspected company holdings in West Texas and the Panhandle during the past 10 days. They also included Lee and Quay Counties of New Mexico, in their itinerary.

* * *

M. F. Waters, general manager of the Smith Separator Company, and James Morgan, sales manager of the same concern, have made a trip of the Texas fields, Mr. Waters traveling through the Gulf Coast fields, and Mr. Morgan going on to Shreveport, La., and Smackover, Ark.

* * *

J. J. O'Hern, of Laredo, Tex., is back from a trip to New York and he and Mrs. O'Hern have taken an apartment in San Antonio, Tex., for a couple of months. Wilkins Seacord and wife of Laredo have also taken an apartment in San Antonio for a few weeks. The two men are associated as O'Hern & Seacord, operators in the Laredo territory.

* * *

H. A. Ray, formerly with the land department of the Amerada Petroleum Corporation, at Shreveport, La., has joined the Natural Gas & Fuel Corporation organization at El Dorado, Ark., in like capacity since orders were issued closing the Amerada corporation's land department at Shreveport.

* * *

D. H. Christman, one of the best known refinery men in the business, for the past 12 years superintendent of refineries for the Crystal Oil Refining Corporation, of Shreveport, La., has resigned that position, effective November 11, to become general superintendent of the refinery department for the Shreveport Producing & Refining Company.

* * *

M. T. Glass, of the land department of The Texas Company, at Shreveport, La., has resigned from the company, with which he has been connected since 1915 in various capacities in various departments, effective November 15. He goes to the Greenwood Producing Company of the Moody-Seagraves gas interests at Shreveport as head of the land department which he will organize. He will be succeeded in The Texas Company by T. O. Winn, chief scout since the transfer of Jeff Adams to Houston, Tex., several years ago.

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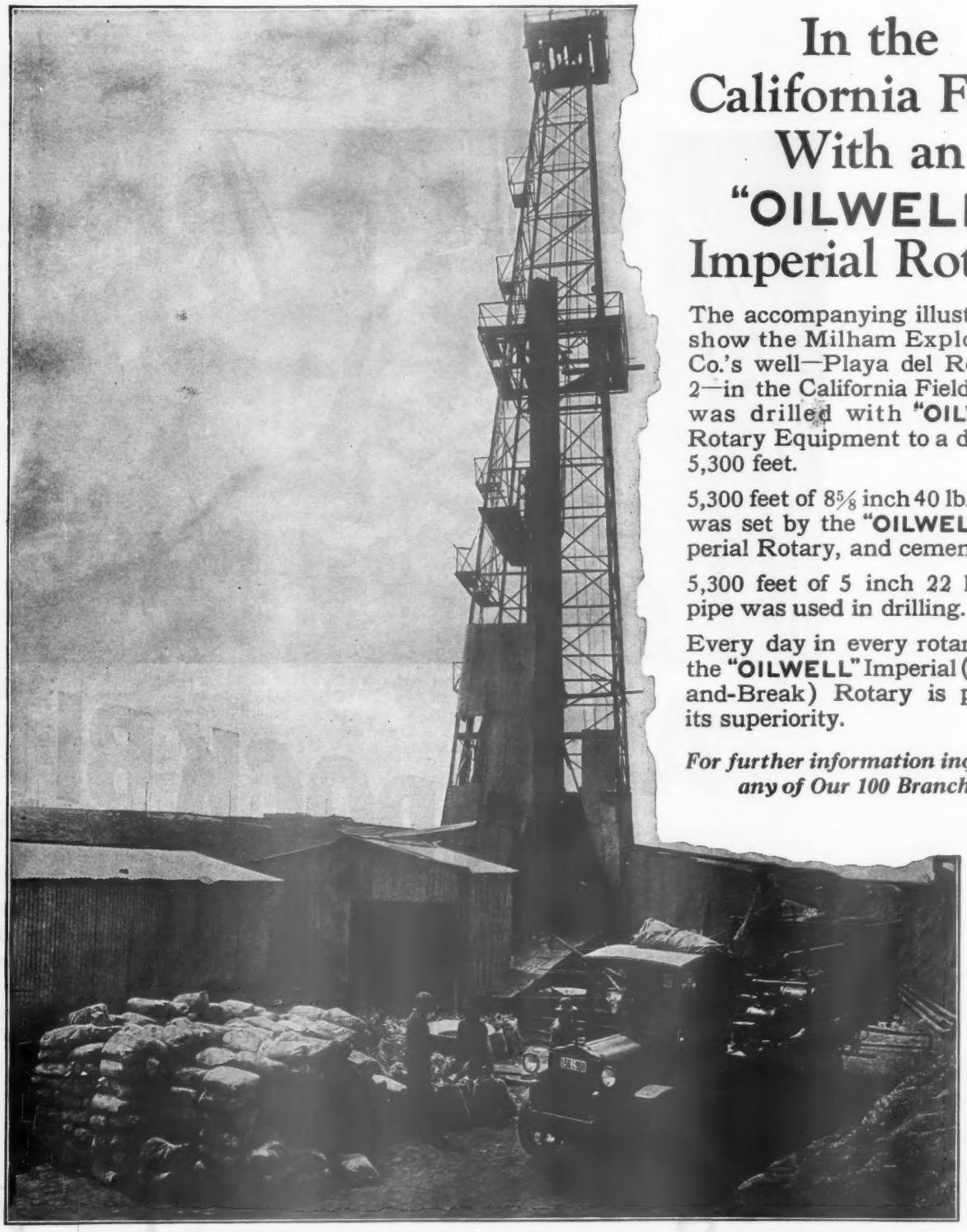

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The accompanying illustrations show the Milham Exploration Co.'s well—Playa del Rey, No. 2—in the California Field which was drilled with "OILWELL" Rotary Equipment to a depth of 5,300 feet.

5,300 feet of 8⅝ inch 40 lb. casing was set by the "OILWELL" Imperial Rotary, and cemented.

5,300 feet of 5 inch 22 lb. drill pipe was used in drilling.

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A MILE OF 8⅝ INCH 40 LB. CASING

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Natural Gas Developments

FLAT RATE DECISION WILL STIMULATE USE

NEW YORK, Nov. 19.—Discussing the question of the flat rate for gas, now considered antiquated by gas engineers, as against a sliding scale rate with provisions which would make "convenience" customers pay their way, former Judge William L. Ransom, of counsel for numerous New York utilities, pointed out the importance of the recent decision in the United States District Court holding the "flat rate" for gas arbitrary and confiscatory.

He indicated his belief that acceptance of economic principles involved in this decision is likely to lead to rates which will permit more general use of gas as an industrial fuel, as well as for heating and refrigeration in apartments and houses.

The decision was by Judge Hazel, in Federal District Court for western New York, in a suit filed by the U. S. Light & Heat Corp. to enjoin the flat rate. The company wanted to use gas for fuel but could not change from other fuels economically as the gas rate was $2.35 per 1,000 cubic feet. The gas company wanted the business and tried to change its rates so that all consumers would pay a service charge and thus permit serving large consumers at a lower rate. The state law against a service charge caused the Public Service Commission to refuse approval of proposed new rates and court action followed.

The suit was based by U. S. Light & Heat Corp. on the ground that its constitutional right to gas at a reasonable rate was violated by the "flat rate," because it compelled them to pay the cost of servicing thousands of "convenience" consumers, thereby making their rate excessive.

Judge Ransom points out gas companies have long been held back from full utilization of their facilities by the antiquated "flat rate" for each 1,000 feet of gas; that it is a relic of the days when gas was used almost exclusively for lighting purposes; that electric companies long since have based their rates on quantity consumed resulting in large expansion in business and that the old "flat rate" has barred extensive use of gas for house heating and as an industrial fuel.

Judge Hazel's decision, he adds, found the law confiscatory because it compels gas companies to serve many customers at a loss and compels regular and larger consumers to pay a rate to make good the loss on "convenience" consumers; that a lawful rate must be such as will require the casual gas consumers to pay the full cost to the company of delivering the small quantity of gas they use and the cost of the "readiness to serve" them.

Judge Ransom then added that "the rates of the larger gas companies in New York City are not in such form as to require those thousands of 'convenience users' to pay their own way."

EXTEND GAS LINE

HOUSTON, Tex., Nov. 21.—Pipe has been ordered and construction will be started by January 1 on the extension of the Houston-Texas City Junction gas line to Galveston, to be laid by the Galveston Gas Co., according to Paul E. Nichols, manager.

MORE GAS FOR KINGSVILLE

HOUSTON, Tex., Nov. 21.—Houston Oil Co. is laying a small gas line from the White Point field to Kingsville, Kleberg County, Southwest Texas, to supply that city. The gas from the Kingsville Field, which has been supplying the town, is claimed to be inadequate.

CONSTRUCTION OF DENVER GAS LINE WILL COMMENCE ABOUT DECEMBER 1

By Tolbert R. Ingram

DENVER, Colo., Nov. 19. — Actual construction of the Amarillo-Denver gas line by the Colorado Interstate Gas Co. will commence December 1 as a result of the awarding of contracts and the clearing up of all the preliminary details. The Oklahoma Contracting Co., of Dallas, Tex., was awarded the contract for the line from the field to the New Mexico line, a distance of 86 miles, and Williams Brothers, Inc., of Tulsa, Okla., secured the contract for the New Mexico-Colorado division aggregating 220 miles. The contracts cover excavating, laying and painting the pipe and backfilling.

There were eight bids submitted, and while the amounts were not disclosed, the estimated cost of the work is $2,250,000. The contracts were awarded by Ford, Bacon & Davis, Inc., the engineers in charge for the Colorado Interstate Gas Co. This firm has established headquarters at Colorado Springs, and has had 50 engineers at work for the past five months making surveys, obtaining rights of way, and making a minute report upon the terrain and the subsurface conditions. The cost of the entire project, including compressor stations and gathering lines, and branch lines, is estimated at approximately $22,000,000.

Pipe Delivery

The line will require approximately 100,000 tons of 22-inch pipe, contract for which went to the National Tube Co., of Pittsburgh, Pa., a subsidiary of the United States Steel Corp. The pipe is now rolled and the first shipment consisting of two carloads, is due to arrive at Devine, a flag station on the Atchison, Topeka & Santa Fe Railroad, 9 miles east of Pueblo, about November 21. Additional shipments are expected to follow at the rate of 10 to 15 cars a day. The Texas division will consist of 22-inch pipe, and the New Mexico-Colorado division of 22-inch and 20-inch pipe. The pipe will all be of the plain end type. The plans also provide for 15 miles of 12-inch pipe from the main line to Colorado Springs, and 29 miles of 10-inch pipe from Pueblo junction to Concrete and Portland, west of Pueblo, but it is understood these are not included in the contracts for the main line just awarded.

The project is being constructed by the Colorado Interstate Gas Co., controlled by the Standard Oil Co. of New Jersey, and the Prairie Oil & Gas Co. The Public Service Co. of Colorado, a subsidiary of the Cities Service Co., will be the local distributor of gas in Denver, receiving the supply at the city's limits. The company was granted a franchise by the municipality last February, and rates for domestic consumption were approved by the city council of Denver a few weeks ago. While Colorado Springs is expected to have natural gas, arrangements have not yet been made. The present distribution system at Colorado Springs is owned by the municipality. The distributing system at Pueblo also is owned by the Public Service Co. of Colorado. The Colorado Fuel & Iron Co. has constracted for the use of gas in its mills at Pueblo and is expected to consume about 8,000,000 feet a day. The rate to that company is said to be 16 cents per 1,000 feet for the first five years and 18 cents for the second five years. Large cement manufacturing plants of the Ideal Portland Cement Co. will use gas at Portland and Concrete, Colo.

Gas Properties Involved

The gas properties back of the project consist of 334,000 acres of gas leaseholds in a blocked-up area in six counties in the Amarillo Field upon which are 24 producing wells with a total open flow capacity of 525,000,000 feet per day, with an additional and almost equal quantity cased off while originally drilling these wells for oil. Several subsidiaries have been formed to handle the Texas end. The gas acreage of the Amarillo Gas Co.

(Continued on Page 108)

MISSISSIPPI PLANS OIL AND GAS LAWS

SHREVEPORT, La., Nov. 19. — The Mississippi Oil & Gas Association, organized a year ago at Meridian following the discovery of commercial gas at Amory, will meet in Meridian, December 12 and 13 for the purpose of discussing and recommending to the Mississippi legislature for enactment proposed laws for the regulation of oil and gas prospecting and conservation of those resources. It is believed that the State's conservation policy as to oil and gas will be patterned after those of Louisiana and Arkansas as the conservation commissioners of those two states and the secretary of the Louisiana-Arkansas division of the Mid-Continent Oil & Gas Association took an active part in organization of the Mississippi association last year and have been invited to attend the forthcoming meeting to give the benefit of their experience with the oil and gas legislation.

GAS FOR BALLOONS

Gas companies are used to telephone calls asking for homebrew recipes, for help in selling poems, and for diets for sick dogs, says the Wall Street Journal. An even more difficult demand was recently made upon a Detroit gas utility when it was requested to provide gas for 15 balloons, each holding 80,000 cubic feet, within a few hours.

The mains and pumping system near the take-off field were not adequate for the service required. Two locomotives were borrowed from the local railway and were run on a siding near the pumping plant of the gas works. Through temporary connections their steam was used to drive compressors for additional pressure, and by this means the 15 balloons were supplied with more than 1,000,000 cubic feet of gas in 12 hours, without affecting the gas service of that part of the city.

One of the earliest records of the use of manufactured gas for balloons dates back to 1856, when "the celebrated aeronaut, S. M. Brooks," purchased 12,000 cubic feet of gas for his balloon.

SUPPLY HOUSE FOR MONROE

SHREVEPORT, La., Nov. 21.—Although it has been the scene of an active drilling campaign extending through the past 11 years which has classed it with the world's largest gas producing areas and the source of the larger proportion of the world's carbon black supply, the Monroe gas field has never had a pipe yard or supply company warehouse of its own. All equipment and supplies have been furnished from branches and warehouses maintained by all the major supply companies in Shreveport. Effective November 15, however, it will be possible for the Monroe Chamber of Commerce to list such an enterprise among the town's commercial activities as Monroe Pipe & Supply Co. will open for business at Tenth and Washington streets on that date with a $150,000 stock of Central Tube Co. products. The company is a subsidiary of the S. Bender Iron & Supply Co. of Shreveport and the Monroe yard will be in charge of H. Dennis.

MOODY & SEAGRAVES ENTERING MISSISSIPPI

SHREVEPORT, La., Nov. 19.—Moody & Seagraves interests of Houston, Tex., who are operating extensively in the Greenwood gas district of Caddo Parish, and are also developing 15,000 acres of proven and semiproven stuff in the Richland Parish gas district, have gone into Mississippi on a large scale. J. P. Evans, of Shreveport, who is handling the Richland Parish development for them, said they have taken over from him a 10,000-acre block in Township 9, Range 7, Lee County, and will finish a well he had under way, No. 1 Whitesides, in Section 16-9-7, which is drilling with cable tools at 1,200 feet. Contract depth is 2,850 feet unless gas or oil is found at lesser depth.

In addition to this transaction they also have taken a half interest in 94,000 acres in scattered blocks in Itawamba, Lee, Union, Tippah and Prentiss Counties, northwest of the Amory discovery well in Section 7-13-17, Monroe County, and the Natural Gas & Fuel Corp.'s No. 1 Rye, Section 22-15-17, which was reported today as good for 2,000,000 to 4,000,000 feet of gas at 2,693½ feet and still drilling with cable tools in about 10 feet of sand.

FRANK J. STOLTZ HEADS HOUSTON GAS & FUEL CO.

HOUSTON, Tex., No. 21—The Houston Gas & Securities Co. has taken over the control of the Houston Gas & Fuel Co., distributing company here, and Frank J. Stoltz has been made president of the latter to succeed James A. Baker, resigned. Mr. Baker will continue with the Houston Gas & Fuel Co. as a director.

In the reorganization of the Houston Gas & Fuel Co., E. G. Connette was elected vice president; J. A. McKenna, secretary-treasurer; William A. Raymond, assistant secretary-treasurer and general manager. On the board will be Mr. Baker, Mr. Stoltz, Mr. Connette, Mr. McKenna, Mr. Raymond, O. R. Seagraves, Clarence R. Wharton, Ellis L. Phillips and George W. Olmstead.

MEN TAUGHT TO COOK BY GAS CO. EXPERTS

Ten thousand men, most of them married, received cooking instruction from gas company home service experts during the year ended October 1, Alexander Forward, managing director of the American Gas Association, reports.

"The growing number of women entering the commercial, professional and political fields is responsible for this influx of men into cooking classes," Major Forward said. "Furthermore, it must be remembered that the union worker has his working hours regulated and, as a rule, gets home before his wife. Naturally, he turns cook because he is hungry and wants his meal on time."

Several home service directors reported that special classes for men alone were arranged when it became evident that the men objected to the coeducational features of the course.

COMPANY TO PAY FORFEIT

HOUSTON, Tex., Nov. 21.—The Houston Gulf Gas Co., which supplies at the city gates the Houston Gas & Fuel Co. with gas has agreed to pay a forfeit of $150,000 plus interest for a 71 days' delay in getting gas to this city on March 1, 1926, as provided in the gas franchise. This was due to the delay in completing the company's line from southwest Texas fields.

You Can Specify Any Thinness

Savings *by* Smith

The Smith patented method of electric welding of the longitudinal seam makes possible the production of pipe from 16 to 22 inches in diameter and 30 feet in length of *uniform* length, diameters, and wall thicknesses.

Fewer Joints

Smithsteel Pipe is made plain end and plain end beveled for any field joint. The 30-foot lengths of Smithsteel Pipe will require only 175 joints to the mile as compared with 263 needed for the usual 20-foot lengths of pipe.

Joining Simpler

Smithsteel Pipe is accurate in both outside and inside diameters. The wall thicknesses are uniform. The joints will butt up evenly at all points making alignment and either welding or coupling simpler and surer. Joining will therefore be quicker and easier.

The Use of Less Metal

Due to the Smith method of fabricating, and the high quality steel, less metal can be used in the body of the pipe.

Any Thinness

You can specify any thinness you require and each and every foot in every Smithsteel Gas Line Pipe will be the same thinness. The metal will be exactly the thinness you specify and free from scale.

Now—it is not necessary to put more metal in the ground than you need. Smith will make, for you, the pipe for natural gas lines that suits all conditions encountered and you can depend upon it having a long life.

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SMITHSTEEL GAS LINE PIPE

Field Problems and Their Solution

EDITED BY THOMAS F. SMILEY

In order that men connected with the drilling, producing and transporting branches of the petroleum industry may procure quickly a solution of many problems confronting them from time to time in their work, The Oil and Gas Journal has arranged with leading engineers and other recognized authorities to answer questions submitted by readers of this publication pertaining to the work of drilling and producing crude oil and transporting this product.

Everyone is invited to submit questions freely. These questions will be submitted to proper authorities by Mr. Smiley, who edits the page, and answers, based on the best available information, will be published. Each question should give as much detail as possible, especially where it relates to matters where depths of sands, types of sands and operations on adjoining properties would have a bearing on the problem involved. The source of all questions will be considered as confidential and only initials will be published in connection with the question.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or practices which are improvements.

WHEN IS MIXTURE EXPLOSIVE?

When using air to repressure a sand, what percentage of air in the air-gas mixture will produce an explosive mixture? Which is more effective in repressuring, air or gas?—E. W. S.

When there is 80 to 85 per cent of air in the air-gas mixture it is termed explosive. A mixture of 85 per cent air and 15 per cent gas is regarded as the most dangerous of all mixtures.

It is not known at this time whether air or gas is the more effective in repressuring. The United States Bureau of Mines station in Bartlesville, Okla., is working on this problem. The general opinion is that gas is more effective than air because it is believed that gas renders the oil remaining in the sand less viscous, thus making it flow more readily through the sand.

GETTING STRAIGHT HOLE

I would like to know if the use of the automatic rotary drilling outfit will give you a straighter hole. It seems to me that the wells drilled with this equipment are likely to be straighter than when the ordinary rotary drilling outfit is used.—A. W. T.

Investigation shows that there is very limited data on this subject. Information obtainable seems to indicate that there is little to choose between the differential drive and the ordinary rotary equipment in point of straightness of the holes made by them.

FOURBLE DEFINED

I note the word "fourble" in an Oil and Gas Journal article. I suppose it is related to the word "four," but I don't understand its exact meaning. Will you give me the definition, please?—I. G. S.

A fourble is four joints of rotary drill pipe. Similarly a thribble is three joints and a double is two joints. The height of the derrick usually determines whether to pull drill pipe in fourbles or shorter lengths.

DRILLING THROUGH GAS SAND

I am having trouble drilling through a gas sand with cable tools. Is there any way of overcoming this difficulty?—A. T. W.

This trouble usually can be overcome by circulating mud fluid down the casing, the mud fluid then being carried up outside of the casing. This method was used successfully in the California oil fields prior to the adoption of the rotary method of drilling. If necessary, baroid or iron oxide may be used to add weight to the mud fluid. Preparations for this purpose are manufactured and distributed under various trade names. These are introduced into the well with a slush-pump and are said to perform the work satisfactorily, greatly increasing the weight of the rotary mud. It is said further for these "heavying" compounds that they serve to lubricate the bit, reinforce the bore hole and strengthen weak spots in the wall structure.

"WATER WITCH"

What is your opinion about this instrument that I am told is used to locate water in an oil well? I understand they are using it a good deal in California.—D. L. J.

The instrument to which you refer is the "water witch," which was perfected by an employe of the Shell Co. of California. It is an electrical device. Two wires, each with an electrode attached to the lower end, are run into the well. The device is described in detail in "Summary of Operations, California Oil Fields," No. 12, volume 10, issued by the California State Mining Bureau. Copies may be obtained by writing to the San Francisco or Los Angeles office of the Bureau. The water witch has been used successfully in many of the California oil fields. Tests were made in either the Garber or the Tonkawa Field in Oklahoma several years ago, but they were not successful.

BURNING OIL TANKS

Can you tell me how long an oil tank ignited by lightning is likely to burn before it boils over and can you give me any informaion as to the best way of providing emergency fire-walls or fire-breaks? Will a burning oil tank cause whirlwinds that are likely to increase the danger of the flames spreading to other tanks?—E. R. W.

So many variables enter into the answer to your first question that it is doubtful whether it ever could be answered accurately. The amount of water in the tank certainly would be an influencing factor. In the search for the information you ask an article by Ralph J. Reed of the Union Oil Co. of California, was read. In it Mr. Reed, describing a fire that destroyed 14 oil tanks last year, mentions that it was 17 hours from the time lightning struck the first tank until the major boil-over occurred.

Emergency fire-walls have been constructed by digging a trench and setting corrugated iron sheets in it, with the tops of the sheets inclined toward the fire. Such a makeshift will not stand much of a fire, though it is likely to break at least one boil-over. It goes without saying that it is far better to plan and build fire-breaks before the lightning strikes. They should be fire and boil-over resistant and carefully located. Temporary fire-breaks, when emergency compels their erection, should, of course, be fire-resistant.

Small tornadoes or "twisters" sometimes are generated by fierce oil fires and they may do serious damage. It is a matter of record that whirlwinds of this sort have been so violent that they have torn down houses and lifted small buildings into the air.

A bulletin on "Extinguishing Oil and Gas Fires" by Bowie (United States Bureau of Mines Bulletin No. 170) deals with the problems you present. You may obtain a copy by writing to the Superintendent of Documents, Washington, D. C.

WATER CAUSING TROUBLE

I drilled in a gas well recently and it made a lot of water with the gas, so I ran in tubing to blow out the water. The water came from the tubing for a while and then the amount of water would get less, also more gas would come from the tubing. Water also continued to come in from between the tubing and casing. The rock pressure is about 600 pounds and the line pressure is around 200 pounds. Can you tell me how to get rid of the water?—C. H. D.

As you do not give the depth of the well or the depth at which the tubing is placed, it is rather difficult to be of assistance to you. Apparently you have not sufficient tubing in the well. It is suggested that you gradually lower the tubing and note the results. If this does not remedy the difficulty, please send in a record of your well. It is possible that a correct siphon installation would remove your trouble. However, before lowering the tubing or installing a siphon, it would be advisable to try to determine the source of the water and to shut off the water if possible.

ELIMINATING WATER CHEAPLY

I have a number of gas wells producing from a 10-foot sand at 400 feet and a 12-foot sand at 600 feet. The production amounts to 20,000 to 40,000 feet a day from each well. They are making considerable water. When the water is down the rock pressure is about 100 pounds. I would like to know how I can get rid of the water without it costing too much.—A. J. C.

The most inexpensive installation you could use for removing the water at this time would be a small siphon line. Any one of the gas companies could provide you with the information necessary to its use. It also is possible that you could pump the water at very low cost. Eventually you would be under the necessity of removing the water by pumping anyway, and on account of the short lift you could install pumps at this time while the revenue is highest to better advantage than you could later.

CARBORUNDUM BITS

I would like to find out something about carborundum bits. I have been told that they are being manufactured. Can you tell me anything about this?—S. D. B.

Information obtained by this department is that the bit to which you refer consists of a solid cylinder of carborundum, corrugated at the lower end and equipped with water courses. It is cemented to the end of the drill pipe with the use of a collar. Carborundum of various sizes of mesh is said to have been tried, with the result that a 16-inch size was found to be the most satisfactory. Baked clay was used as a binder. A bakelite product also was used for this purpose. For detailed information regarding carborundum bits for use in rotary drilling you are advised to write to Eggleston Smith, Grand Central Terminal, Suite 5849-A, New York, N. Y.

TERM OF GAS LIFT'S USEFULNESS

How long can a gas lift be used in an oil well, or isn't there any way of determining the time?

If ordinary methods of gas-lift operation are employed in producing oil the gas lift becomes inoperative when the working (or back) pressure required to lift the oil is equal to the rock pressure remaining in the sand. This is because oil cannot flow into the well when the working pressure and the rock pressure are in equilibrium. Each pressure counterbalances the other.

The gas lift may be used when the working pressure required to lift the oil is equal to or greater than the rock pressure if a flow chamber is installed in the well. The flow chamber is provided with a valve arrangement at the bottom which permits the fluid to build up in the flow chamber to a certain height and then closes. The oil then may be flowed from the chamber by means of the gas lift without imposing a pressure on the sand. This method is used in intermittent gas-lift operations.

GELATIN VS. NITROGLYCERIN

Is gelatin as good to use in shooting as nitroglycerin? We have had a number of arguments about this and I would like to get some information on the subject.—I. R. T.

Inquiry reveals differences of opinion with reference to the relative merits of nitroglycerin and gelatin. Opinions obtained indicate that in many instances gelatin is fully as effective as nitroglycerin. In very hard formations, however, it is possible that nitroglycerin gives better results because of the greater speed with which it explodes. Unfortunately, little authoritative data is available on oil-well shooting.

Walter H. Jeffery, in his book on "Deep Well Drilling," says: "In shooting wells with solidified nitroglycerin and oil-well explosive gelatin it was found that occasionally part of the explosive would be expelled, unexploded, and would fall on the derrick floor or adhere to parts of the rig. More complete explosion of these gelatins was secured by 'spiking' each shell of the explosive with a stick of dynamite. While this might be likened to the spiking, so-called, of liquor with water, yet better results have been secured with the gelatin by thus using a small quantity of dynamite with it. The dynamite, being a more slowly detonating explosive, its effect probably is to provide a second explosion that might explode any gelatin left unconsumed by the first explosion."

I am interested in the different methods for the location of oil. In the Oil and Gas Journal of September 29 there is a reference made to a number of these different methods. I am interested in the seismograph, core drilling, torsion balance, geophone, geophysical magnetometer. If you have discussed these different methods in former copies of the Journal I would be glad to know.—H.E.B.

Articles in The Oil and Gas Journal containing much of the information you seek follow: January 7, 1926, "Science Taking Hold of Oil Finding," by F. C. Brown; May 20, 1926, "Core Drilling as a Guide in Making Geological Record," by H. J. C. MacDonald; March 4, 1926, "Coring With Standard Cable Tools," by V. C. Smith; June 2, 1927, "Geophysics Anyone Can Understand," by E. J. Raisch; July 22 and August 5, 1926, articles by Dr. A. C. Heiland; August 25, 1927, "Recording Magnetometer Marks Another Step in Oil Finding." In the issue for December 1 there will be an article on these scientific devices which you will find especially interesting.

A SURE GRIP on the Hardest Joint

The leverage on the cam-die,—when operating the GUIBERSON TOOL JOINT TONG— is TREMENDOUS! A non-slip grip on the hardest joint is ASSURED! The cam-die has a full inch of play and grips ANY joint, no matter how worn.

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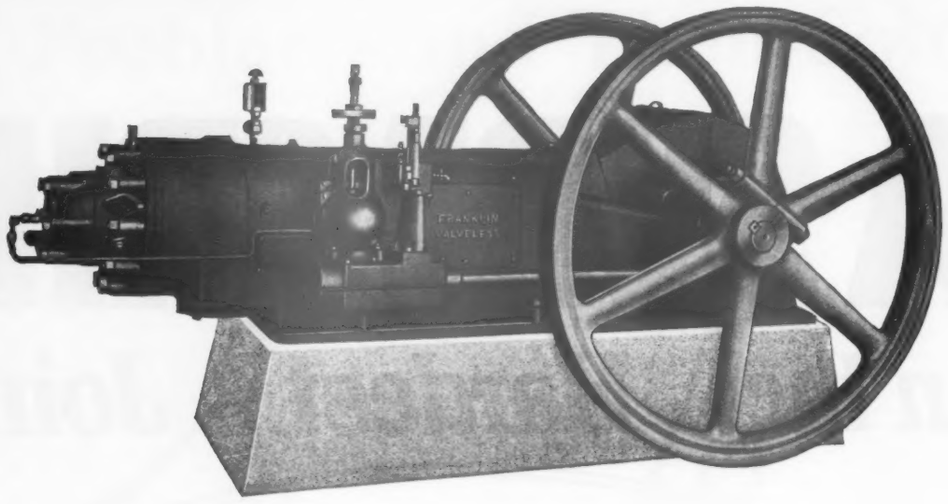

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Oil Pumping Engine

HERE is the power plant that has the fewest possible number of parts to require attention, adjustment, repairs or replacement. After you've finished drilling, move in one of the Franklin Oil Pumping Engines. Any user will tell you that it can be operated at an extremely low fuel, water and lubricating cost.

These pumpers come in 30-40-50 and 75 Horse Power. Can be equipped with Reverse or One Way Clutch.

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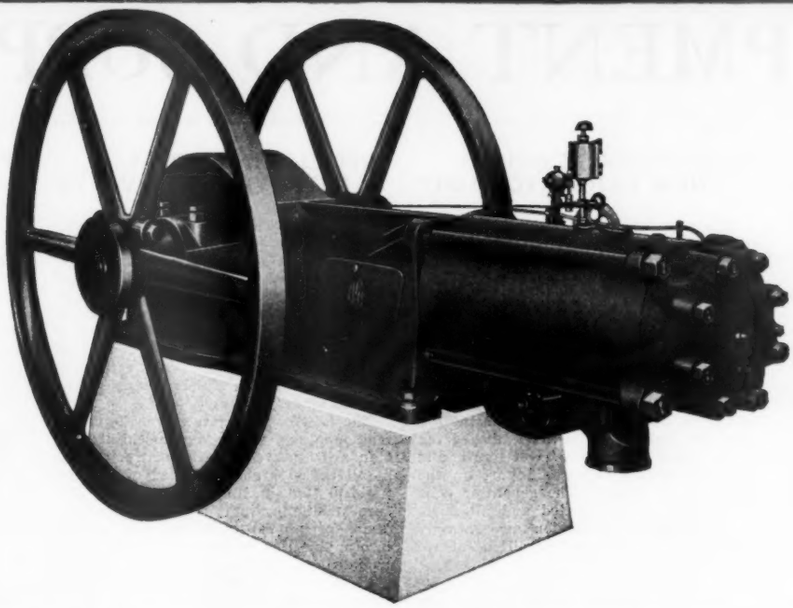

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AFTER you've finished making hole, move your Drilling Engine to the next job and hook up a Franklin Gas Pumping Engine. Interchangeable on the same block without shifting a single bolt. These engines can show you a power, speed and flexibility almost unbelievable.

Say good-bye to the old "biler" and learn what real economy and freedom from trouble is like. Ask any Franklin user!

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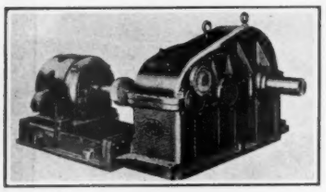
EQUIPMENT AND SUPPLIES

NEW PUMPING UNIT HAS GOOD FEATURES

The two-speed, double-reduction Philadelphia oil well pumping unit is said to possess certain exclusive features resulting from study of pumping problems in the field. According to the manufacturers, this unit is made to give the desired



Two-speed double-reduction pumping unit.

slow pumping speed (without operating the motor on its resistance) and the necessary high crank speed for redrilling or completing, as well as the high sprocket speed for driving the rod and tubing hoist.

These two speeds are accomplished by a double set of pinions on the high speed shaft and a double set of gears on the intermediate shaft. The "change-over" in speed is done by a handwheel conveniently located on the outside of the casing. Indicating arrows on this handwheel show which of the two speeds is in use. The gear wheels are balanced, one against the other, and all end thrust is eliminated, thus providing high efficiency and eliminating wear on the bearings.

The standard ratios provided in the Philadelphia unit are 57:1 for pumping and 22¾:1 for cleaning out. Thus with a 1,200-revolutions-per-minute motor (1,140 full load speed) a pumping speed of 20 strokes per minute is obtained and 50 revolutions per minute on the crank shaft for the drilling or cleaning-out operation. Of course, this latter speed can be reduced by 50 per cent with the motor controller if so desired.

If a pumping speed of 20 strokes per minute is too high, then a 900-revolutions-per-minute motor can be used (860 revolutions per minute full load speed), which would give a pumping speed of 16 strokes per minute and 70 revolutions per minute on the crankshaft for drilling or cleaning out.

With the two-speed gear, the ratio in speeds between pumping operation and the drilling and cleaning-out operations may be made any value which is found to be the most serviceable. The overall efficiency of the Philadelphia two-speed, double-reduction Herringbone oil well pumping unit is guaranteed to be 90 per cent for all loads within the design of the equipment.

Because Philadelphia oil well pump units are "self-contained," they eliminate the usual bandwheel and its attendant belts, chains, pulleys, or sprockets, etc. They are mounted on a common base plate with motor and flexible coupling, which not only keeps them in alignment, but renders them capable of being transported from place to place. Philadelphia units are said to be impervious to dust, moisture, or acid fumes.

TRADE LITERATURE RECEIVED

The Master Motor-Grinder, a grinding tool that can be used also as a motor, is described in a folder issued by the Master Electric Co., Dayton, Ohio.

"Chemicals for the Petroleum Industry" is the title of a bulletin issued by the Mathieson Alkali Works, Inc., New York, in which the Mathieson hypochlorite process for the refining of petroleum distillates is discussed. Detailed sketches, illustrating plant layouts for batch and continuous treating, are given.

WESTINGHOUSE BUILDS NEW GENERATOR UNIT

A direct connected turbine generator unit having a rating of 3 kilowatts has been placed on the market by the South Philadelphia works of the Westinghouse Electric & Manufacturing Co. This apparatus has been developed to meet the growing demand for a high-grade small noncondensing steam turbine generator lighting set for use with oil well rigs, steam shovels, isolated pumping plants and for general outdoor construction work. It also is suitable for marine application and can be installed aboard tug boats, lighters, yachts, river craft and also for standby service in port on the larger type vessels. The generator coils are specially impregnated and all parts requiring such protection are heavily sherardized to meet the conditions of applications of this nature.

The Doheny-Stone Drill Co., of Los Angeles, has issued an illustrated booklet on drilling equipment manufactured by that company.

GRIT ELIMINATED BY IMPROVED GATE VALVE

Pipe line officials, refinery superintendents and others having to do with the transportation of oil by pipe line have been interested in an improved type of gate valve worked out by Charles R. Law, president and general manager of the DeSoto Foundry & Machine Co. of Mansfield, La., to solve the problem of an absolutely tight seat. The valve will be manufactured in standard sizes at the DeSoto plant.

The Law conduit gate valve, the manufacturers say, is in its essentials the standard type valve with positive closure at all times through disposal of the grit problem that in time prevents such closure in the ordinary type. Grit, sand, scale, foreign matter of any sort getting into a pipe line is an unending source of trouble and expense, and pipe line officials have been working for years to find some way of getting rid of it.

"The Columbian Crew" is issued by the Columbian Rope Co., Auburn, N. Y.

NEW CYCLONE HOIST STANDS HARD TEST

Described by its manufacturers as the "most efficient, most economical and longest-lived light-weight high-speed chain hoist built," the new Model K Cyclone Hoist, manufactured by the Chisholm-Moore Manufacturing Co., Cleveland, Ohio, makes its appearance. The new hoist is constructed on the same gyrating yoke principle found in the previous Cyclone model hoist manufactured by the same company. New engineering improvements, however, give the new hoist a working efficiency of 90 per cent as against 80 per cent for the previous Cyclone models.

In a series of tests, the new Model K Cyclone was operated continuously for 320 hours. At the end of that period it was inspected. It was found that no repair parts were needed and only slight wear was noted on the working parts. This test was the equivalent of lifting and lowering 38,400 one-ton loads.

Among the changes that made this record possible was the addition of antifriction bearings at every rotating point. Altogether, eight ball bearings, four roller bearings and one Timken thrust roller bearing in the lower swivel hook help to increase the new hoist's efficiency.

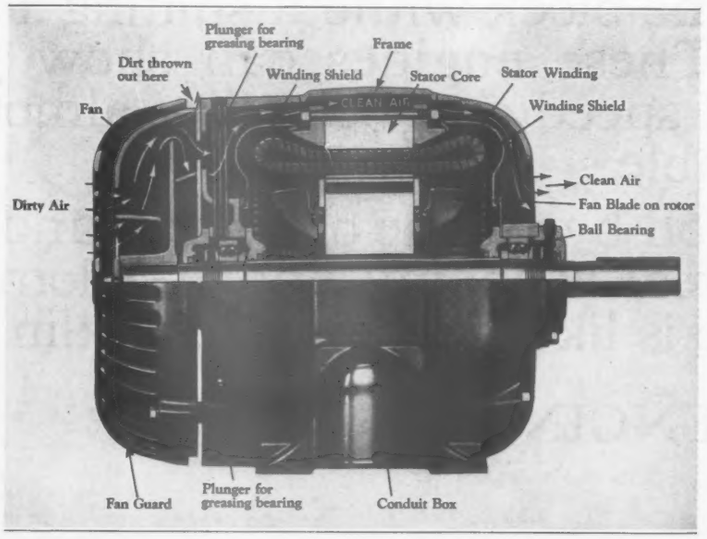
In the new model K Cyclone the four eccentric roller bearings are built in one complete unit which does away entirely with the loose rollers. Another improvement is the long-life lift wheel. A new steel alloy gives exceptionally clean and accurate chain pockets, and, in the test referred to, they show practically no sign of wear after 320 hours. All parts are interchangeable. The entire mechanism is enclosed in a dust-proof, oil-tight frame. The hoist is very light, making it possible to carry the smaller models from one job to another.

NEW ELECTRIC MOTOR IMPERVIOUS TO DUST

Although the standard open-frame squirrel-cage motor meets most of the requirements for ordinary service, it has certain disadvantages. It has been found, for instance, that when operated in places where there is much dust in the air its air passages soon are clogged, resulting eventually in overheating unless the motor is frequently cleaned. An even more serious condition is created where the air is full of metallic dust, particularly iron dust, because such dust works into the winding and in time may cause a breakdown of the insulation.

The answer to the problem appears to lie in the recent development of enclosed stator windings are totally enclosed, thereby preventing any dirt from gaining access to these windings. Cooling air is drawn through an inlet opening at the free end of the motor by means of a special type fan which also functions as an air cleaner. The clean air is blown across the winding shield at the free end of the motor, through the annular air space, then across the outer end of the stator core lamination, thence across the winding shield at the pulley end and out through openings in the pulley end bearing arm.

The fan is of the closed impeller type and is so constructed that the foreign



The windings of this ball-bearing motor are totally enclosed with winding shields and the fan is designed so that it throws all dust and dirt out of the air by centrifugal action.

self-ventilated types in which the windings are protected from the air currents. Fairbanks, Morse & Co. announce a line of self-ventilated enclosed motors which also have an interesting air cleaner feature.

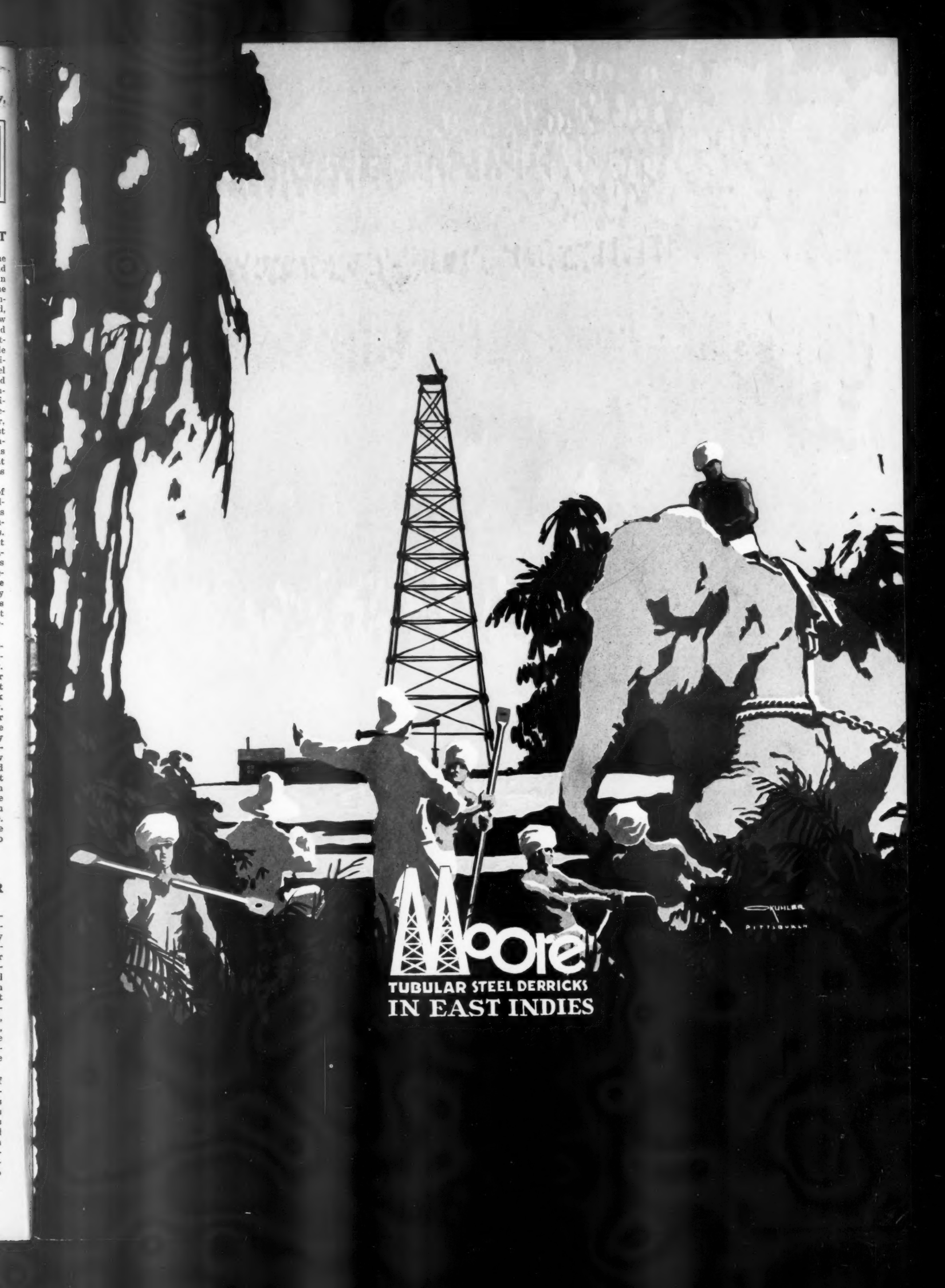
This motor has a standard stator core and windings and a standard rotor mounted in a supporting shell with an annular air passage between the outside surface of the stator core and the shell. Winding shields are provided so that the particles are thrown out by centrifugal force, between the edge of the outer shroud and the supporting frame. A perforated guard is placed around this fan-cleaner and is carried by the supporting frame. The whole purpose of this guard is to prevent accidental contact with the fan, the fan itself being an entirely self-contained air cleaner and blower.

Provision is made for lubricating the ball bearings of this motor without removing the guard, fan or bearing arms.

PELICAN COMPANY TO SELL COOLING TOWER

SHREVEPORT, La., Nov. 21.—Pelican Well Tool & Supply Co. of Shreveport, through its engineering and specialty department, has taken the agency in Mid-Continent and Pacific Coast territory for the Lakin Manufacturing Co. of Philadelphia, manufacturers of an improved aluminum cooling tower, and will push this product in the oil country, where it is adaptable to compressor stations, gasoline plants, etc. Light weight, elasticity, spray proof, accessibility of all parts, portability and ease of cleaning are some of the virtues claimed for this new design of all metal "zig-zag" or baffle plate type of cooling tower.

The new tower is made in four sizes of two to four units each with a corresponding wide range of capacities, the weights running from 75 pounds to 600 pounds net, and 275 pounds to 1,200 pounds water-loaded. The small dimensions and light weight with high efficiency which may be increased to meet larger requirements by addition of more units, are expected to make the fixture attractive to the oil industry.


Moore
TUBULAR STEEL DERRICKS
IN EAST INDIES
KUHLER
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in EAST INDIES

Where the strange sounds and stranger sights of the tropics press in on every side, Moore Tubular Steel Derricks offer a welcome contrast to the Western eye. More welcome still to the oil man in this far-away land is their strength and dependable service.

Here, under the equator, is no place for compromise. Only the best of equipment can surmount the difficult conditions. That is why the Moore is used.

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TUBULAR STEEL DERRICKS

LEE C. MOORE & COMPANY, INC. PITTSBURGH · TULSA

Established 1907

Dallas, Texas · Houston, Texas · Wichita Falls, Texas · Borger, Texas · Parkersburg, W.Va.
Casper, Wyo. · Shreveport, La. · El Dorado, Kan. · El Dorado, Ark.

Oklahoma Production Third Quarter

State Report of Producers and Royalty Owners of Oil and Gas Properties for July, August and September, 1927

The Oklahoma gross production report for the third quarter of this year, compiled from reports submitted to the State Auditor for taxation purposes, and showing all producers having a total output during the three months worth $5,000 or more and all royalty owners having a total production worth approximately $2,000 or more, is given below. Royalty owners are designated by an asterisk.

A

Name and Address—	Barrels	M. Ft. Gas	Amount
Atlantic Oil Producing Co., Dallas, Tex.	757,142.74	613	$1,035,081.99
*Atlantic Oil Producing Co., Dallas, Tex.	9,866.69	3,769	13,359.76
*Adams Royalty Co., Chicago, Ill.	98,088.10	.....	138,864.66
*Adams Royalty Co., Chicago, Ill.	1,792.19	.....	2,400.79
*American National Bank, Enid	.....	.....	1,939.40
*American National Bank, Enid	.....	.....	3,490.56
N. L. Amster, Ardmore	8,948.69	.....	12,031.23
Arkansas Fuel Oil Co., Pittsburgh, Pa.	8,295.33	.....	8,447.33
American Pipe Line Co., Wichita Falls, Tex.	6,859.29	.....	9,050.30
American Pipe Line Co., Wichita Falls, Tex.	7,298.56	.....	9,232.65
American Pipe Line Co., Bartlesville	.....	.....	23,143.92
American Oil Development Co., Pittsburgh, Pa.	7,105.63	.....	8,880.24
Argo Oil Co., Denver, Colo.	55,313.23	473	116,595.96
*Argo Oil Co., Denver, Colo.	.....	61,706	4,880.79
*B. N. Alton, Tonkawa	.....	.....	10,595.96
*American Royalty Petroleum Co., Tulsa	1,244.94	.....	2,777.77
*American Royalty Petroleum Co., Tulsa	.....	.....	3,283.32
*Walter Andrews et al, Weslaco, Tex.	5,376.57	.....	7,202.36
*Walter Andrews et al, Weslaco, Tex.	.....	.....	9,030.21
*James M. Anthis, Muskogee	.....	.....	2,848.74
*Anderson and Person, Blackwell	.....	.....	5,151.18
*E. C. Aldridge, Wewoka	.....	.....	38,684.68
S. W. Anthony, Mounds	.....	.....	7,449.29
*H. N. and Ethel Andrews, Newkirk	.....	.....	2,835.72
*Lizzie Allen, Bristow	.....	.....	2,183.70
*J. A. Alexander, guardian, Okemah	.....	.....	1,998.24
*Agirine Oil & Gas Co., Tulsa	.....	.....	3,407.17
Nettie H. Chase and Wilmer Anderson, Los Angeles, Calif.	.....	.....	2,777.81
Alemo Oil Co., Tulsa (Oct., 1925, to Sept., 1927)	.....	.....	65,900.59
*Allegany Royalty Co., Olean, N. Y.	.....	.....	2,696.71
Amerada Petroleum Corp., Tulsa	2,286,875.64	.....	3,078,586.63
Amerada Petroleum Corp., Tulsa	.....	1,360	50,612.05
*Amerada Petroleum Corp., Tulsa (suspense)	67,304.49	.....	91,843.85
*Amerada Petroleum Corp., Tulsa (suspense)	.....	.....	329.36
*Amerada Petroleum Corp., Tulsa (suspense)	.....	.....	423.65
*Amerada Petroleum Corp., Tulsa (suspense)	.....	.....	15,326.74
*Amerada Petroleum Corp., Tulsa (Fixico lease)	.....	.....	93,781.76
*Forest Anderson, Earlsboro	.....	.....	23,913.32
*Atlas Royalties Co., Tulsa	.....	.....	82,315.19
*Atlas Royalties Corp., Tulsa	3,394.14	.....	4,529.16
*American Royalty Petroleum Co., Tulsa	2,805.68	.....	4,694.75
American Oil & Refining Co., Oklahoma City	.....	Gas	98,074.20
*S. A. Apple, Ardmore	.....	.....	23,765.16
Adams and Prince, Amarillo, Tex.	.....	.....	8,759.70
*C. F. Adams, Ardmore	.....	.....	3,320.19
Alma Royalty Corp., New York, N. Y.	.....	.....	21,871.90
N. L. Amster, Ardmore	6,991.46	.....	11,263.13
Arthur Oil Co., Sistersville, W. Va.	3,963.71	.....	4,864.68
Arthur Oil Co., Sistersville, W. Va.	.....	14,229	839.02
Almota Oil Co., Tulsa	.....	.....	9,338.15

B

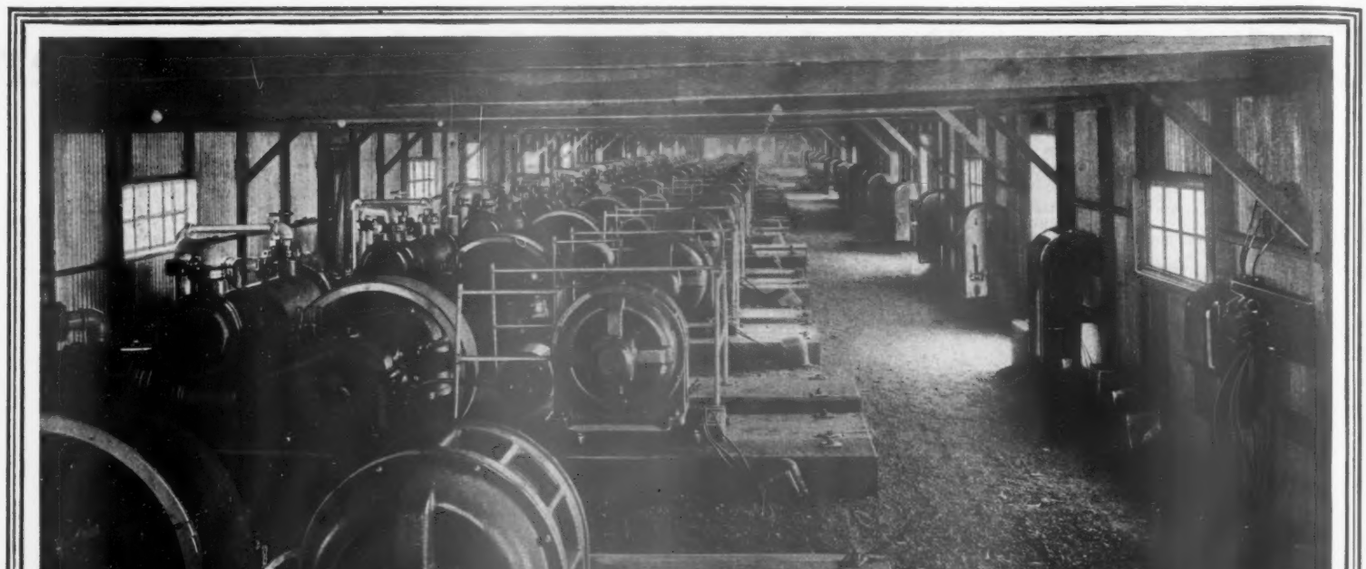
*E. J. Blank, Cushing	.....	.....	11,630.10
*George T. Burke, Shawnee	.....	.....	2,141.88
*B. J. Badger, Okmulgee	.....	.....	1,163.26
*John H. Bennett, Paulx Valley	.....	.....	3,337.19
Britton-Johnson Co., Tulsa	7,634.23	.....	8,698.32
*J. L. Bryan, Chickasha	.....	.....	3,751.29
*Stacy Baker, Okmulgee	.....	.....	8,637.76
*T. J. Baker, Okmulgee	.....	.....	9,293.51
*Henrietta M. Billings, Enid	.....	.....	5,683.43
*J. W. Brown, Blackwell	.....	.....	2,716.27
*H. E. and Jesse F. Bryant, Earlsboro	45,030.14	.....	56,551.28
Barbara Oil Co., Oklahoma City	7,140.19	.....	11,324.65
A. C. Brown Oil Enterprise, St. Louis, Mo.	7,180.76	.....	8,769.33
*Ben Boepple et al, Covington	.....	.....	2,893.94
*Jamie L. Barnum estate, Kaw	.....	.....	2,781.88
Boggs Oil Corp., Oklahoma City	.....	.....	24,570.80
James Brann, receiver, Bartlesville	.....	.....	9,454.73
James Brann, receiver, Bartlesville	.....	.....	3,061.69
Burton Springfield, Tulsa	.....	.....	20,377.83
*C. C. Bombarger, Paden	.....	.....	3,543.70
*James Ballard, Cushing	.....	.....	5,503.17
J. W. Bird and William Hanley, Bradford, Pa.	6,090.02	.....	7,682.10
*Nettie E. Beatty, Los Angeles, Calif.	1,712.06	.....	2,042.81
*May Blasdel, Blackwell	.....	.....	2,306.02
Bay State O. & G. Co. and Paden Oil Co., K. C., Mo.	4,829.13	.....	6,343.20
Bay State Oil & Gas Co., Kansas City, Mo.	12,665.77	.....	16,222.17
*A. E. Bowers, Wellington, Kans.	1,475.33	.....	2,096.98
*Blue Ribbon Oil & Dev. Co., Shawnee	.....	.....	12,781.77
*E. R. Bechtel, Blackwell	5,156.76	.....	6,902.02
Bu-Vi-Bar Petroleum Corp., Tulsa	2,496.65	.....	5,022.75
*Joe Blubaugh, Tonkawa	.....	.....	4,127.63
*Benton Wilson, Greenfield, Mo.	.....	.....	5,702.22
*Lola May Burks, Braman	.....	.....	3,499.44
W. A. Brooks and J. E. Carson, trustees, Miller Bros. 101 Ranch, Marland	.....	.....	25,168.39
*Albert Emmet Barney, Bristow	.....	.....	2,226.44
*Mrs. Mary F. Barnett, St. Austin, Tex.	2,222.22	.....	2,844.45
*B. B. Blakeney, Oklahoma City	.....	.....	11,442.65
*James F. Burke, Tulsa	4,082.33	.....	5,485.79
*James Brazell, Oklahoma City	.....	.....	3,442.84
*W. S. Billings, Long Beach, Calif.	.....	.....	4,782.20
*Geo. M. Billings, Long Beach, Calif.	.....	.....	4,905.34
*Frank Buttram, Oklahoma City	.....	.....	35,884.79
*Frank Buttram, Oklahoma City	.....	.....	526.87
*Frank Buttram, Oklahoma City	.....	.....	27,018.56
*Frank Buttram, Oklahoma City	.....	.....	10,465.86
Baltic Operating Co., Bartlesville	5,220.66	.....	6,571.21
*Belco Royalty, Inc., New York City	.....	.....	56,100.10
Blackwell Oil & Gas Co., Blackwell	.....	.....	200,377.74
*Blackwell Oil & Gas Co., Blackwell	.....	.....	2,114.12
*James Brann, Bartlesville	5,967.24	.....	7,814.44
James Brann, Bartlesville	961.74	.....	1,170.92
Black, Sivalls & Bryson, Inc., Bartlesville	7,197.88	.....	9,332.42
*Black, Sivalls & Bryson, Inc., Bartlesville	6,951.76	.....	8,493.23
Berry Petroleum Co., Tulsa	17,061.31	3,047	21,984.42
*Buchard and Bina Denker, Enid	.....	.....	2,322.81
Brownlee & Martin, Tulsa	3,595.08	.....	4,471.49
*Geo. S. Bole, Tulsa	2,777.66	4	4,053.20
Geo. S. Bole, Tulsa	15,397.93	28	20,692.31
*Roy Buckner, Wewoka	.....	.....	2,650.27
R. D. Brown, trustee, Kansas City, Mo.	4,538.62	.....	4,913.49
E. H. Brady, Tulsa	1,379.82	729	1,735.51
C. E. Burlingame, Bartlesville	5,891.37	.....	7,879.21
*L. J. Burkhalter, Blackwell	.....	.....	3,273.66
J. G. Beard and S. I. Kolb, Duncan	6,276.39	.....	8,283.49
J. B. Beard and S. I. Kolb, Duncan	8,621.29	.....	11,985.52
T. L. Crump & Beard, Duncan	7,789.03	.....	9,644.68
*G. A. Biddle, Braman	.....	.....	3,499.46
*W. O. Broyles, Stillwater	.....	.....	3,583.75
*John L. Brock, Jr., Okmulgee	10,015.86	.....	13,525.26
*Buchner Co., Hoidenville	.....	.....	2,434.27
*J. M. Bumpass, Duncan	.....	.....	5,800.08
Braden & Moore, Tulsa	6,797.49	.....	8,753.47
Braden Co., Tulsa	.....	.....	2,015.80
*W. S. Barrett, Shawnee	.....	.....	1,961.95
*V. E. Bolene, Enid	.....	.....	2,553.48
*J. J. Brown, Jr., Wichita, Kans.	.....	.....	3,076.14
*A. L. Braymer, Tulsa	.....	.....	3,091.24
Paul Burton, Tulsa	2,446.10	318	5,914.26
*W. P. and Maud Brown, Okmulgee	.....	.....	3,068.90
*V. E. Bolene, Enid	.....	.....	3,072.66
*C. B. Billington, Shawnee	3,242.70	.....	4,231.31
*F. R. Billingsley, Tulsa	.....	.....	24,391.29
Katie Snell (nee Brown), Dustin	.....	.....	3,256.03
*Bermont Oil Co., Bristow	4,125.00	3,873	6,002.35
*John F. Burke, Tulsa	2,810.38	.....	3,753.18
*Roy Buckner, Wewoka	.....	.....	2,656.41
Frank M. Breene et al, Tulsa	3,856.64	.....	5,096.68
Frank M. Breene, trust estate, Tulsa	7,306.04	.....	9,231.16
Bryon & Emery, Inc., Tulsa	.....	46,157	5,091.41
*Thos. N. Berry, Stillwater	.....	.....	12,719.50
*L. A. Brown and wife, Tulsa	.....	.....	24,711.15
*S. J. Brown, Duncan	.....	.....	3,485.43
*Augusta Bucholz, Perry	.....	.....	2,967.60
Beacon Oil Co., Bartlesville	7,454.56	.....	9,007.10
Burke-Greis Oil Co., Tulsa	28,788.82	.....	151,689.92
*Burke-Greis Oil Co., Tulsa	.....	.....	6,803.14
Burke-Hoffeld Oil Co., Tulsa	9,479.55	.....	9,648.43
Baker & Strawn, Tulsa	8,077.24	.....	16,319.07
*F. M. Belveal, Enid	.....	.....	6,027.00
M. O. Brice, Okemah	.....	.....	3,112.28
Braman Oil Co., Inc., Tulsa	8,716.54	.....	11,723.11
Barnsdall Oil Co., Tulsa	2,440,752.69	.....	3,230,384.50
*Barnsdall Oil Co., Tulsa	1,405.01	.....	1,994.79
Barnsdall Oil Co., Tulsa	.....	1,303	63,175.52
*Barnsdall Oil Co., Tulsa	182,776.09	.....	243,483.40
*William Buck, Wetumka	.....	.....	4,041.83
*H. A. Born, Seminole	.....	.....	3,938.55

C

*Minnie Lee Cornelius, Muskogee	.....	.....	1,988.91
Commonwealth Trust Co., Okmulgee	5,394.57	.....	6,970.06
*John C. Campbell, Oklahoma City	.....	.....	10,146.32
*R. W. Coe, Ardmore	.....	.....	2,013.72
Coline Oil Co., Oklahoma City	76,134.12	.....	78,829.28
Champlin & Bass, Inc., Holdenville	7,956.72	.....	10,397.51
*J. O. Chapman, Waxahachie, Tex.	.....	.....	3,413.96
Clark & Cowden, Duncan	32,521.82	.....	41,230.77
J. A. Chapman, Tulsa	8,875.71	.....	12,370.49
*John T. Cooper, Wewoka	.....	.....	1,919.24
*Laura A. Clubb, Tulsa	.....	.....	17,639.37
Central National Bank, Okmulgee	.....	.....	51,827.36
J. R. Cole, Jr., Tulsa	.....	.....	12,062.49
*W. S. Cline, trustee, Newkirk	.....	.....	2,249.24
J. D. Canary, Littleton, Colo.	.....	.....	4,728.79
Continental Oil Co., Tulsa	4,628.82	.....	13,311.62
Continental O. & R. Co., Independence, Kans.	.....	.....	10,216.48
Continental Oil Co., Denver, Colo.	582,054.76	19,510	764,097.06
*Continental Oil Co., Denver, Colo.	.....	.....	98.76
Cameron Refining Co., Ardmore	41,106.05	.....	52,051.77
W. S. Critchlow, Ardmore	.....	.....	25,247.75
Elizabeth R. Crockett Hays, Oklahoma City	8,434.30	.....	10,397.30
Crews Estate Oil & Gas Prod., Enid	9,281.08	17,348	15,585.04
*L. E. Crews heirs, Enid	1,325.87	.....	2,065.20
*Laura E. Crews, Enid	.....	.....	1,737.12
Cotton Belt Petroleum Co., Tulsa	19,049.79	238,519	24,212.29
*Consolidated Pipe Line Co., Sand Springs	.....	.....	2,553.78
Consolidated Pipe Line Co., Sand Springs	.....	.....	68,067.21
*I. M. Clubb, Kaw	12,852.72	.....	17,583.97
Campbell Oil Co., Tulsa	4,415.07	.....	5,278.45
Creo Oil Co., Tulsa	6,909.25	.....	8,302.80
*Samuel J. Caudill, Tulsa	3,910.02	.....	5,231.12
*Cadijah C. Helmerich, Tulsa	4,290.26	.....	5,762.33
Conservation Oil Co., Tulsa	34,038.60	.....	43,852.93
M. L. Carr, Okmulgee	.....	.....	2,696.22
Cortez Oil Co. and Alvarado Oil Co., Tulsa	8,705.09	.....	10,064.75
Colonial Royalties Co., Tulsa	.....	.....	6,545.33
Comar Oil Co., St. Louis	1,100,902.83	.....	1,519,047.56
Comar Oil Co., St. Louis, Mo.	.....	2,110,316	84,975.94
*Commercial Drilling Co., Tulsa	8,217.03	.....	10,922.78
Commercial Drilling Co., Tulsa	3,460.55	.....	4,194.96
Central Oil & Gas Co., Tulsa	8,760.62	.....	15,973.57
*Central Commercial Oil Co., Tulsa	6,711.10	.....	9,137.03
*Laura P. Campbell, Los Angeles, Calif.	.....	.....	3,361.29
*V. L. Cruce, Tuscon, Ariz.	.....	.....	14,422.78
*Clarissa Diveley Conyers, Covington	.....	.....	2,239.98
*John A. Campbell, Oklahoma City	.....	.....	3,784.30
*Samuel J. Caudill, Tulsa	.....	.....	5,485.99
*Cal-Cul Oil Co., Okmulgee	.....	.....	29,555.07
Cal-Cul Oil Co., Okmulgee	.....	.....	1,094.84
W. S. Critchlow, Ardmore	36,998.81	.....	49,748.12
*Calloway and Rosa Rogers, Earlsboro	.....	.....	48,720.99
*W. S. Churchill, Tulsa	.....	.....	4,143.50
J. H. Carlock, Ardmore	.....	.....	5,610.10
*Joe Carter, Wewoka	.....	.....	24,081.03
*A. V. and L. B. Cluck, Seminole	.....	.....	30,128.54
*H. D. Campbell, Wewoka	.....	.....	8,427.40
G. W. Connelly, Caney, Kans.	.....	.....	13,096.79
*Fred A. Chapman, Ardmore	.....	.....	8,006.59
*M. E. Carpenter, Oklahoma City	6,268.35	.....	6,646.37
*Edward B. Cox and Jake L. Hamon, Ardmore	.....	.....	28,841.16
*Noah J. Caves, Stroud	.....	.....	2,595.12
*Crude Oil Royalties Corp., New York City	.....	.....	16,784.03
Cudahy Oil Co., Cleveland, Ohio	13,457.92	.....	16,095.65
*Mary C. Cates and Wirt Franklin, Ardmore	2,919.75	553	3,256.27
*Craig and Andrews, receivers, Chandler	.....	.....	2,298.51
*Anna Elizabeth Cox, Ardmore	.....	.....	5,306.17
*W. S. Cline, Newkirk	.....	.....	3,491.68
*W. S. Cline, trustee, Newkirk	.....	.....	2,323.80
Carter Oil Co., Tulsa	4,932,228.96	.....	6,435,703.83
Carter Oil Co., Tulsa	.....	Gas	283,240.34
Continental Oil Co., Denver, Colo.	57,975.20	28,907	76,635.49
*Arthur H. Campbell, Wewoka	.....	.....	3,512.92
C. R. Colpitt, Collinsville	.....	.....	3,266.87
*S. M. and M. L. Cowan, Pauls Valley	.....	.....	2,101.57
Dillard H. Clark, Jr., Ponca	.....	.....	7,121.24
Executor estate of Dillard H. Clark, Sr., Ponca	.....	.....	3,560.58
Cromwell Oil & Gas for A. G. Rogers,	.....	.....	2,307.38
*Cal-Cul Oil Co., Okmulgee	1,794.41	.....	2,368.91
Chas. A. Coakley, receiver for Aztec Oil., Okmulgee	.....	.....	10,344.08
Champlin Refining Co., Enid	168,136.49	.....	241,741.87
*J. D. Campbell, Seminole	4,702.25	.....	6,208.09
*Margaret Case, New York City	.....	.....	2,229.27
*Central Union Trust Co., New York City	.....	.....	4,810.28
Cumberland Petroleum Co., Cleveland, Ohio	12,250.66	.....	15,389.14
*Ed Chaney, Tonkawa	.....	.....	4,708.52

D

Denver Prod. & Refining Co., Okmulgee	.....	.....	209,833.52
*Denver Prod. & Refining Co., Okmulgee	.....	.....	1,193.44
Deep Rock Oil & Refining Co., Tulsa	68,581.51	.....	98,060.98
*Dave Schonwald, Blackwell	.....	.....	3,541.75
*H. H. Darks, Oklahoma City	.....	.....	2,918.41
The Dallas Co., Tulsa	.....	.....	5,168.72
Beatrice Davis, Tulsa	11,244.98	.....	14,125.43
*V. E. Dillard, Ardmore	.....	.....	4,212.86
*J. J. Deaner, Okmulgee	6,461.42	.....	8,929.08
*J. H. Dillard, Ardmore	.....	.....	5,292.05



A battery of twenty-four Ingersoll-Rand Type XOB Compressors in a gas-lift station of the Carter Oil Company.

Twenty-Four Type XOB Compressors Under One Roof Can Mean But One Thing—*Perfect Satisfaction*

Ingersoll-Rand Compressors were designed to meet the oil producer's needs, and those already installed are performing to the utmost satisfaction of everyone.

Duplex frame construction allows easy and quick changing of cylinders. A series of cylinder combinations providing the various pressures to be met in the oil fields are stocked in warehouses throughout the oil districts.

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Branches in the Oil Fields

BUTTE	NEW ORLEANS
BIRMINGHAM	PITTSBURGH
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EL PASO	SEATTLE
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INGERSOLL-RAND COMPANY—11 BROADWAY, NEW YORK CITY

Offices in principal cities the world over

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890-C

Ingersoll-Rand

Name and Address—	Barrels	M. Ft. Gas	Amount
Dixie Drilling Co., Sapulpa	.....	.....	31,297.00
*B. F. and Mary Davis, Wewoka	6,949.57	.....	8,036.96
*Delk Inv., Corp., St. Louis	.....	.....	5,183.94
J. D. Dixon, Duncan	.....	.....	4,184.12
*M. S. Douglass, Weleetka	.....	.....	2,145.35
H. C. Derrick, Okmulgee	4,115.86	.....	5,270.13
*J. F. Darby, Muskogee	.....	.....	2,093.94
Darby Petroleum Corp., Tulsa	109,793.32	32,100	144,441.16
*Dover Investment Co., Bartlesville	2,281.42	.....	2,980.18
L. R. Davis, Tulsa	44,615.10	.....	59,063.13
*O. H. Douglas, Okmulgee	.....	.....	3,413.04
*R. T. Douglas, Shawnee	.....	.....	10,144.21
*Henry Depew, New York City	.....	.....	3,428.10
Daisy Bell Petroleum Co., Ardmore	7,152.76	9,965	8,810.66
*L. S. Dolmon, Ardmore	.....	.....	3,111.03
Doss Royalty Co., Oklahoma City	32,443.21	.....	42,569.35
*Doss Royalty Co., Oklahoma City	12,283.11	.....	16,099.62
Dixie Oil Co., Inc., Shreveport, La.	351,511.95	.....	426,803.06
Dixie Oil Co., Inc., Shreveport, La.	.....	480	20,787.61
Devonian Oil Co., Tulsa	103,409.46	.....	146,573.12
Delaware Consolidated Oil Co., Tulsa	26,247.08	.....	29,422.33
Douglas Oil Co., Tulsa	.....	.....	3,944.65
*H. T. Douglas, Shawnee	.....	.....	13,469.68
*J. A. Doyle, Wewoka	.....	.....	19,124.31
Delmar Oil Co., Bartlesville	31,588.47	112,508	44,394.71
*Hector and Sylvia Derdeyn, Pauls Valley	.....	.....	2,465.13
*Earl Davis, Tulsa	3,823.75	.....	5,102.04
*W. L. Dixon, Duncan	8,612.08	.....	11,009.27
*Henry Depew, New York City	.....	.....	3,293.25
*Mont R. Davis, Seminole	3,143.32	.....	4,083.96
*J. C. Donoghy, Tulsa	.....	.....	2,721.89
*J. G. Davis, Trousdale	.....	.....	2,823.00
*L. L. Davis, Asher	.....	.....	3,403.90
*C. J. Davis, Asher	.....	.....	3,403.90
*J. G. Davis, Trousdale	.....	.....	5,846.00
*C. E. Denney, Alva	2,051.12	.....	2,218.26
Byron Drew, Ardmore	.....	.....	1,943.26
*J. D. Dixon, Duncan	2,923.47	.....	2,568.53
*W. Y. Dilley, trus.ee, Waurika	7,473.48	.....	7,936.18
*D. B. Duff, Cleveland, Ohio	.....	.....	6,074.38
*Frank Duncan and Virginia Duncan et al, Tulsa	.....	.....	2,563.56
*Harry H. Diamond Oil Co., Holdenville	.....	.....	5,572.91
*F. C. Dings, Chicago, Ill.	2,796.34	.....	3,466.97
*B. F. Davis, Wewoka	.....	.....	11,359.51
*Annie Day, Earlsboro	5,567.20	.....	7,340.70
*J. F. Day, Earlsboro	2,783.60	.....	3,670.47
Howard, Duffield & Berlin, Tulsa	.....	.....	4,897.51
U. T. Duncan, Blackwell	.....	.....	2,934.87
E. D. Davis Oil Co., Oklahoma City	.....	.....	8,913.83
E			
*T. T. Eason, Enid	11,889.30	.....	17,555.25
T. T. Eason, Enid	4,766.35	.....	5,969.77
*Eastern Royalty Corp., New York City	.....	.....	19,242.40
*Elm Oil Co., Tulsa	2,901.62	.....	3,888.06
Elm Oil Co., Tulsa	12,193.28	20,780	15,560.05
Echo Oil Co., Tulsa	5,193.13	.....	6,642.33
Ellis Drilling Co., Wichita Falls, Tex.	5,406.55	3,794	7,296.79
Ellis Drilling Co., Wichita Falls, Tex.	5,257.71	5,858	7,585.97
Evans Bros., Coalinsville	.....	.....	8,074.65
Etheryn Oil & Gas Co., Independence, Kans.	.....	.....	8,329.35
Rudolph Eldracher, St. Louis, Mo.	.....	.....	5,553.55
*J. W. Edwards, Seminole	.....	.....	10,482.22
Eagle Picher Lead Co., Henryetta	1,980.50	65	6,911.35
*C. C. Endicott estate, Tonkawa	.....	.....	4,165.18
Empire O. & R. Co., Bartlesville	.....	Gas	25,880.94
Empire O. & R. Co., Bartlesville	1,007,509.28	.....	1,324,779.34
*Empire O. & R. Co., Bartlesville	48,360.73	.....	64,643.21
Empire O. & R. Co., Bartlesville	.....	Gas	634.68
*Empire O. & R. Co. (Suspense), Bartlesville	13,179.45	.....	16,316.39
*Empire O. & R. Co. (Suspense), Bartlesville	49,756.73	.....	68,481.02
*Empire O. & G. Co. (Suspense), Bartlesville	13,588.18	.....	18,650.55
*Empire O. & G. Co., Bartlesville	22,701.59	.....	30,245.48
*Empire O. & R. Co., Bartlesville	12,881.61	.....	17,123.54
*Empire O. & R. Co., Bartlesville	3,052.62	.....	3,710.88
*Empire O. & R. Co., Bartlesville	5,025.43	.....	6,618.93
Empire O. & R. Co., Bartlesville	15,718.88	.....	20,640.16
Enterprise Transit Co., Titusville, Pa.	3,110.93	.....	3,699.19
Edgwood Oil Co., Tulsa	4,449.27	.....	6,241.22
Edgwood Oil Co., Tulsa	13,498.94	.....	18,840.44
Enlisco Oil Corp., Tulsa	15,005.04	.....	18,593.53
*Laura A. Endicott, Los Angeles	3,624.34	.....	5,249.73
*T. H. Endicott, Los Angeles	2,918.65	.....	4,120.41
Elliott & Vensel, Tulsa	.....	.....	8,199.44
*Enid Bank & Trust Co., Enid	.....	.....	15,073.29
W. H. Elson, Tulsa	.....	.....	8,629.56
Lewis Emery & Sons, Bradford, Pa.	8,997.35	.....	11,487.83
F			
*J. Carl Finch, Lindsay	.....	.....	2,570.56
*D. C. Fitzgerald, Ardmore	.....	Gas	2,734.77
D. C. Fitzgerald, trustee, Ardmore	6,938.74	.....	8,646.26
*Chas. R. Freeman, Checotah	1,475.72	.....	1,905.94
*Chas. R. Freeman, Checotah	2,224.15	.....	3,091.52
Finance Oil Co., Gounda, N. Y.	16,975.43	.....	22,650.43
*G. W. Frazier, Kingfisher	27,933.31	.....	38,302.47
*James F. Foster, Anthony N. Mex.	.....	.....	4,669.01
*J. T. Fennell, Pauls Valley	.....	.....	10,043.35
*Farmers State Bank, trustee, Garber	.....	.....	3,596.68
Fagar Oil & Gas Co., Garber	.....	.....	8,005.68
Flora Okla. Oil Co., Cement	4,548.62	.....	5,731.07
Fort Ring Oil & Gas Co., Fort Worth, Tex.	.....	.....	6,906.47
*C. W. Faile, Fallenburg, Wewoka	4,300.33	.....	6,107.66
*D. T. Flynn, Oklahoma City	.....	.....	2,584.32
*J. M. Fleet estate, Ada	.....	.....	15,396.24
*D. F. Fleet, Ada	.....	.....	15,364.57
*Fleet & Osborn, Ada	.....	.....	2,259.95
Fern Oil & Gas Co., Yale	4,209.50	.....	5,472.76
Fern Oil & Gas Co., Yale	6,064.78	.....	7,756.41
*W. H. Franks, Seminole	.....	.....	26,654.11
J. A. Fulp, receiver, Sapulpa	3,464.11	.....	4,523.18
*Chas. W. Flint, Tulsa	.....	.....	2,957.09
*C. H. Frost, Tulsa	1,632.96	.....	2,194.44
*First National Bank, Chickasha	.....	.....	2,201.15
*Streeter B. Flynn, Oklahoma City	.....	.....	4,051.09
*K. C. Fannell, Chickasha	.....	.....	2,857.39
*Wirt Franklin, Ardmore	2,267.49	1,379	2,927.43
Foster Oil Co., Tulsa	.....	.....	12,924.77
*J. C. Fare, Wewoka	.....	.....	4,792.24
Fox Petroleum Co., Ardmore	.....	.....	6,014.59
Fox Royalty Co., Tulsa	21,539.33	.....	25,908.86
*K. C. Farwell, Chickasha	.....	.....	3,064.85
*Fort Cobb Co., Tulsa	.....	.....	2,252.18
*S. M. Fugate, guardian, Maramec	.....	.....	2,956.68
Fos.er Petroleum Corp., Bartlesville	127,776.74	.....	166,674.60
*Foster Petroleum Corp., Bartlesville	21,276.18	.....	28,612.97
Foster & Davis, Inc., Bartlesville	9,423.57	.....	12,076.27
*A. L. Frederick, San Monica, Calif.	.....	.....	3,193.15
*Fred Frederick, San Monica, Calif.	.....	.....	5,946.04
*George Frederick, San Monica, Calif.	.....	.....	3,193.12
*Mildred A. Frederick, San Monica, Calif.	.....	.....	3,300.67
*J. P. Flanagan, Tulsa	.....	.....	4,028.45
J. P. Flanagan, Tulsa	.....	.....	6,394.50
Fuhrman Petroleum Co., Okmulgee	.....	.....	60,346.62
*Fuhrman Petroleum Co., Okmulgee	.....	.....	6,411.00
*Wirt Franklin, Ardmore	18,172.93	.....	22,052.32
Wirt Franklin, Ardmore	152,132.73	120	188,063.17
G			
*Ed L. Gibson, Seminole	.....	.....	6,001.00
*W. E. Grisso, Seminole	.....	.....	12,328.65
Gorton Trust Co., Cement	10,745.80	.....	13,470.92
R. F. Garland & Co., Tulsa	.....	.....	19,332.71
R. F. Garland, Tulsa (three quarters combined in this report)	.....	.....	665,360.52
*Horner Grisso, Seminole	.....	.....	7,784.62
*W. E. Grisso, Seminole	.....	.....	89,746.26
W. E. Grisso and Gypsy Oil Co., escrow, Tulsa	4,347.84	.....	11,452.43
*W. E. Grisso, Seminole	4,005.72	.....	5,313.11
Gilmer Oil Co., Ardmore	136,194.97	.....	160,986.62
F. A. Gillespie & Son, Tulsa	24,595.07	.....	29,790.05
Gardner Petroleum Co., Tulsa	33,211.76	.....	31,831.56

Name and Address—	Barrels	M. Ft. Gas	Amount
*James H. Gardner, Tulsa	4,082.33	.....	5,485.99
*A. P. Gibson, Shawnee	1,377.24	.....	2,532.90
Gates Oil Co., Ardmore	10,297.26	.....	12,258.93
Gilliland Oil Co., Tulsa	23,965.52	.....	33,141.08
*Gilliland Oil Co., Tulsa	.....	.....	279.48
C. O. Gregg, Ardmore	3,547.58	905	4,412.05
Glidden Oil Corp., Tulsa	14,063.89	.....	18,216.64
Galvez Oil Corp., Tulsa	8,661.93	925,749	13,033.40
*J. Wood Glass, Nowata	3,994.46	.....	5,008.16
Goldelline Oil Corp., Oklahoma City	28,070.89	4,375	39,244.74
*Sarah E. Gaume, Wichita, Kans.	.....	.....	2,422.10
Griffin Prod. Co., Tulsa	4,594.13	.....	7,956.76
Mary Gooden* and The Texas Company, Tulsa	.....	24,560	3,457.28
*Mabel Garner, Wewoka	.....	.....	6,736.73
Gled Oil Co., Tulsa	15,097.20	.....	20,258.15
*H. N. Greis, Tulsa	4,082.33	.....	5,485.99
Gray Oil Co., Tulsa	4,265.99	.....	5,884.02
*M. L. Glass, Tulsa	1,098.23	.....	2,042.63
*C. W. Goltry, Enid	.....	.....	1,882.67
Gilcrease Oil Co., Tulsa	19,195.96	.....	25,774.19
*Ethel Glenny, Blackwell	.....	.....	2,305.02
Garvin Drilling Co., Duncan	.....	.....	17,797.52
*Annie Gahagan, Wewoka	.....	.....	57,962.95
*Edward Garst estate, Coon Rapids, Iowa	2,080.27	.....	2,917.42
Otho T. and Violet H. Gilburtson, Muskogee	.....	.....	5,355.00
*F. H. Greer, Tulsa	.....	.....	2,554.54
*F. H. Greer, trustee for Royalties Co., Tulsa	.....	.....	43,015.43
*Garner Royalty, Inc., Long Beach, Calif.	.....	.....	6,748.74
*Frank R. Gunn, Wewoka	.....	.....	2,382.35
*W. A. Graham estate, Clarion, Pa.	.....	.....	3,349.89
James H. Graham, Bartlesville	7,905.77	.....	10,232.02
*J. M. Gillette, Tulsa	1,409.34	.....	1,982.10
*George M. Gillett, Jr., Baltimore, Md.	.....	.....	2,915.33
*Walter H. Gant and N. B. Feagin et al, Duncan	.....	.....	6,658.67
Walter H. Gant, Ardmore	5,196.15	.....	6,461.93
*Walter H. Gant, Ardmore	.....	.....	1,558.21
Walter H. Gant and N. B. Feagin, Ardmore	5,675.46	.....	6,265.94
Dolman, Feagin, Gant & Tyer, Ardmore	4,332.55	.....	5,080.91
Gladys Bell Oil Co., Tulsa	19,447.30	125,986	31,829.73
Gypsy Oil Co., Tulsa	2,370,482.54	.....	3,139,816.57
Gypsy Oil Co., Tulsa	380,876.76	.....	495,811.37
Gypsy Oil Co., Tulsa	.....	.....	495,811.37
Gypsy Oil Co., Tulsa	.....	2,220	120,345.61
Gypsy Oil Co., Tulsa	.....	664	25,831.12
*Gypsy Oil Co., Tulsa	2,012.30	.....	2,498.46
Gypsy Oil Co., Tulsa (commercial)	1,082.35	23,389	4,219.35
*Gypsy Oil Co., Tulsa (Cumsey lease)	4,334.20	.....	5,735.89
Thomas Gilcrease, Tulsa	3,902.47	.....	4,995.14
*Thomas Gilcrease, Tulsa	.....	.....	1,631.08
Galt Brown Co., Ardmore	3,816.50	.....	5,166.41
*Edward Galt, Ardmore	2,168.48	.....	2,883.66
Edward Galt, Ardmore	14,884.11	.....	17,607.56
Gled Oil Co., Tulsa	14,740.36	.....	19,929.32
*H. N. Greis, Tulsa	2,816.39	.....	3,753.78
N. T. Gilbert, receiver	4,882.86	.....	6,558.81
E. L. Robinson-Gibson Zahniser Oil Corp., Tulsa	11,986.75	.....	18,281.57
N. P Gilbert, Tulsa (special)	5,877.79	.....	8,868.90
*Charles A. and Florence Graham, Montebello, Calif.	.....	.....	2,985.18
Gray Oil Co., Tulsa	3,478.75	2,338	4,814.57
Grimes & Gillespie, Tulsa	14,906.40	.....	20,380.63
*Galer Oil Co., Tulsa	.....	.....	32,293.06
John J. Grace, Brooklyn, N. Y.	.....	.....	3,183.56
J. Wood Glass, admr. Axel Ford estate, Nowata	.....	.....	2,166.24
H			
Healdton Petroleum Co., Ardmore	.....	.....	27,075.17
*Healdton Oil & Gas Co., Enid	4,782.12	.....	6,480.82
Healdton Oil & Gas Co., Enid	23,932.33	9,610	35,355.79
Humble Oil & Refining Co., Houston, Tex.	327,634.99	.....	455,114.56
Humble Oil & Refining Co., Houston, Tex.	.....	207,944	10,548.04
W. T. Hales, Oklahoma City	65,022.70	89	84,910.70
W. T. Hales, Oklahoma City	1,088.25	1,532	1,419.99
Home Gas Co. of Cushing, Cushing	7,112.08	1,238	19,800.04
J. A. Hull Co., Tulsa	391,117.82	126,221	523,946.66
*J. A. Hull Co., Tulsa	.....	.....	656.69
*Claude Harber, Seminole	.....	.....	4,321.54
*Mary Harber, Seminole	.....	.....	15,301.60
*J. N. Harber, Seminole	15,935.62	.....	38,804.52
*R. T. Harber, Seminole	.....	.....	5,400.00
Hansen Oil Co., Tulsa	6,489.60	244,641	8,367.01
E. L. Harris, trustee, Wewoka	.....	.....	26,547.72
*Haury, Manahan & Co., Enid	1,319.86	.....	2,346.25
*Carl B. Haun, Blackwell	.....	.....	2,902.38
*Wm. L. Hughes, Sapulpa	.....	.....	6,926.76
Marie S. Henry, New York City	.....	.....	2,363.75
N. Hernstadt, New York City	.....	.....	4,999.12
Estate, Jake L. Hamon, Ardmore	.....	.....	7,316.42
Estate, Jake L. Hamon, Ardmore	883.10	.....	1,042.26
Harris & Haun, Inc., Blackwell	8,643.63	.....	38,799.03
*G. W. Hicks, Cox City, Okla.	.....	.....	9,009.82
Herbert Oil Co., Fort Worth	5,324.53	.....	7,294.60
Hiawatha Oil & Gas Co., New York City	.....	.....	4,950.07
Thos. J. Horsley, Wewoka	.....	.....	9,150.43
*P. J. Hill, Shawnee	10,093.91	.....	13,284.81
*G. W. Hildebrandt, Oklahoma City	1,548.52	.....	2,032.77
*Lois E. Highley, Oklahoma City	.....	.....	2,131.70
*E. L. Halsell & W. B. Butz, Muskogee	.....	.....	3,002.72
*S. J. and W. L. Hernstadt, New York City	1,963.97	.....	2,290.78
*Cecil H. Harris et al, Shawnee	.....	.....	14,688.99
*N. George Haddad, Beggs	.....	.....	2,196.82
*W. G. Homesley, Earlsboro	.....	.....	47,652.61
Hombra Oil Co., St. Louis	4,939.73	.....	6,123.62
*S. J. Hernstadt, trustee, Ardmore	5,186.53	.....	6,226.39
Houston Oil Co. of Texas, Houston, Tex.	143,756.55	.....	196,052.42
O. H. Howard, Tulsa	11,330.30	.....	13,288.36
*Richard Hughes, Tulsa	2,449.35	.....	3,291.55
Hefner Co., Oklahoma City	.....	.....	5,841.00
*J. L. Hull, Seminole	.....	.....	8,775.20
*Ruth M. Hall, Holdenville	.....	.....	8,231.70
*J. E. Hall, Sasakwa	.....	.....	7,066.75
*Joll E. Hall, Sasakwa	.....	.....	3,127.31
*Ruth M. Hall, Holdenville	.....	.....	3,774.05
*E. N. Horton, Ardmore	.....	.....	2,726.43
*Benz. F. Hall, Las Cruces, N. M.	.....	.....	2,565.21
*A. N. Hopkins, Davenport	1,699.40	8,989	2,612.20
*Charles Haber, Anaheim, Calif.	.....	.....	8,240.75
*J. J. Hardin, Duncan	3,116.12	.....	3,256.89
*Horace H. Hagan, Tulsa	.....	.....	2,092.44
*J. C. Hartley, agent, Garber	.....	.....	11,973.51
*S. B. Hammons, Seminole	.....	.....	5,331.41
*J. S. Hayes, Newkirk	.....	.....	2,261.02
T. J. Hughes, Cushing	.....	.....	14,110.87
*H. M. Horne, Winfield, Kans.	.....	.....	2,849.76
*Max Hesslein, New York City	.....	.....	9,001.77
Hamon & Colcord, Ardmore	10,389.99	.....	11,138.82
W. E. Hupp, Lexington, Ky.	.....	.....	10,369.83
Hemlock Oil Co., Tulsa	3,959.30	6,518	6,650.60
*Hemlock Oil Co., Tulsa	1,659.41	.....	2,368.71
*W. E. Hightower, Oklahoma City	8,340.47	.....	11,841.92
*Homaokla Oil Co., Oklahoma City	8,957.66	.....	11,840.07
Homaokla Oil Co., Oklahoma City	65,395.77	.....	74,348.02
*Home Stake Oil & Gas, Seminole	.....	.....	153,744.44
*Mary Harber, Seminole	20,284.60	.....	27,552.83
*J. N. Harber, Seminole	25,941.47	.....	35,595.90
*Augusta Hunt, Oklahoma City	.....	.....	5,008.28
*Lewis Z. Harrison, New York, N. Y.	.....	.....	5,270.41
*T. D. Harris, Okmulgee	10,527.53	.....	14,006.32
*Ewing Halsell, Vinita	.....	.....	2,751.13
*E. L. Harris, Wewoka	.....	.....	4,502.44
*W. P. Higgins, Oklahoma City	.....	.....	2,007.91
*John F. Hayden, Tulsa	1,544.28	.....	2,029.43
John F. Hayden, Tulsa	.....	.....	2,378.57
*J. J. Hardin, Duncan	.....	.....	2,236.70
*C. T. Huddleston, Okemah	.....	.....	2,170.10
*Richard Hughes, Tulsa	1,686.22	.....	2,251.87
*Mollie E. Howell, Wellington, Kans.	.....	.....	8,246.80
J. W. Henry, Tulsa	11,262.07	.....	15,895.03
*W. H. Hampton, Okmulgee	7,871.48	.....	10,410.68
Harry Hanbury, Duncan	4,241.86	.....	5,116.87
*Mrs. Belle Hedlund, Cement	.....	.....	3,826.68

I

Name and Address—	Barrels	M. Ft. Gas	Amount
*Investors Royalty Co., Inc., Tulsa	27,114.03	.....	36,672.66
Interocean Oil Co., Tulsa	72,250.31	2,863	93,911.00
*Independent Oil & Gas Co., Tulsa, (suspense)	.....	.....	2,512.23
Independent Oil & Gas Co., Tulsa	1,043,962.81	.....	1,446,855.86
*Independent Oil & Gas Co., Tulsa, (suspense)	2,613.47	.....	3,460.23
*Independent Oil & Gas Co., Tulsa	4,181.55	.....	5,536.37
*Independent Oil & Gas Co., Tulsa	1,479.18	.....	2,017.40
Independent Oil & Gas Co., Tulsa	5,177.00	.....	7,061.00
*J. W. Inscore, Duncan	.....	.....	5,638.53
*O. M. Ireland, Sapulpa	9,554.21	26,324	15,014.93
Indiana Oil & Gas Co., Tulsa	27,519.64	.....	38,712.99
*Indian Royalty Co., Okmulgee	19,141.82	.....	25,704.51
*Indian Territory Illuminating Co., Bartlesville	134,779.50	.....	184,765.73
Indian Territory Illuminating Co., Bartlesville (production)	3,749,594.63	.....	5,230,815.44
*Indian Territory Illuminating Co., Bartlesville	1,792.19	.....	2,400.79
*Imperial Royalties Co., Kansas City, Mo.	33,386.67	.....	46,329.50
*Interior-Indian Osage Agency, Pawhuska	1,063,377.23	.....	1,380,476.33
Interior-Indian Osage Agency, Pawhuska	.....	16,668,626	259,930.36
Interstate Oil & Gas Co., Orlando, Fla.	.....	.....	6,440.00
Iowa Oil & Refining Co., Hawarden, Iowa	.....	.....	10,426.23
*A. B. Ice and L. F. Ice, Tulsa	.....	.....	15,656.70
*J. A. Ingram, Shawnee	.....	.....	2,313.20
*Leonard D. Ingram, Cleveland, Ohio	.....	.....	4,058.96
Iron Mountain Oil Co., Tulsa	19,177.15	17,355	24,708.65
*Iron Mountain Oil Co., Tulsa	.....	.....	1,297.32
Ino Oil & Gas Co., Covington	.....	.....	16,770.72
O. M. Irelan, Sapulpa	8,213.12	63,403	11,608.09

J

Johneda Oil Co., Tulsa	5,159.04	.....	6,642.34
Josey Oil Co., Tulsa	183,111.70	248	268,401.79
*J. A. Jones, Tonkawa	.....	.....	2,194.58
*B. F. and Mary Johnson, Seminole	.....	.....	16,975.66
*Robert L. Jones, Bristow	3,631.06	11,572	5,757.98
*Florence Jenkins and Mayme Walker, Wichita, Kans.	.....	.....	9,592.15
*W. R. Johnston, Shawnee	.....	.....	9,160.21
L. B. Jackson, Sapulpa	3,212.18	.....	6,199.92
L. B. Jackson, Sapulpa	10,132.74	.....	14,312.10
*L. B. Jackson, Sapulpa	.....	.....	4,987.08
*Pearl B. Jackson, Sapulpa	1,435.35	.....	1,763.20
Jackson and Morrison, Sapulpa	1,952.14	.....	2,578.71
Jackson-Wise and Markham, Sapulpa	2,890.36	.....	3,534.67
Jackson-Wise and Bovaird, Sapulpa	2,329.22	.....	2,705.73
Jackson and Wise, Sapulpa	.....	.....	3,110.09
R. C. Jones & Co., Inc., Cushing	10,920.77	4,981	16,754.12
*John B. Jameson, Concord, N. H.	.....	.....	2,638.99
*Junction Oil & Gas Co., Blackwell	4,877.41	.....	6,421.52
*R. S. Jordon, Roosevelt, Utah	.....	.....	1,947.23
*M. W. Jones, Seminole	.....	.....	2,580.19
*Watson B. Joyes, Okmulgee	1,816.91	.....	2,436.13
*M. W. Janes, Seminole	.....	.....	11,607.65
Johnson Oil Refg. Co., Chicago, Ill.	.....	.....	8,407.76
*J. Edward Jones, New York City	.....	.....	32,402.54
*E. H. Johnson, Wellington, Kans.	.....	.....	3,092.15
*Edmond F. Jackson, trustee, Seminole	.....	.....	2,387.66
*Edmond F. Jackson and wife, Seminole	.....	.....	1,560.83

K

Kewanee Oil & Gas Co., Titusville, Pa.	365,331.84	.....	504,110.04
Keener Oil & Gas Co., Tulsa	43,102.61	5,069	52,844.42
*Keener Oil & Gas Co., Tulsa	1,683.99	.....	2,323.83
Kingwood Oil Co., Okmulgee	177,832.36	359	266,497.04
*Kingwood Oil Co., Okmulgee	1,606.85	.....	2,195.64
Kay & Kiowa Oil Co., Tulsa	14,945.12	442	19,321.44
*Frank Knappenberger, Seminole	.....	.....	25,678.59
*Emma B. Kennedy, trustee, Okemah	.....	.....	20,558.85
*Gail R. Kennedy, Okemah	5,069.97	.....	6,829.49
*H. E. Kennedy, Okmulgee	.....	.....	2,456.97
*S. P. Kennedy, Bradford, Pa.	1,967.01	.....	2,577.68
*J. H. Kennedy, Wetumka	.....	.....	5,249.77
*J. H. Kennedy, Wetumka	.....	.....	2,103.42
Knupp Oil Co., Warren, Pa.	4,501.24	.....	5,685.19
*L. Keck, Nacoma, Tex.	.....	.....	3,901.95
I. and L. Keck, Nacoma, Tex.	.....	.....	3,938.35
*J. D. Kimmel, Tulsa	.....	.....	4,003.58
*Sarah J. Knotts, Stillwater	7,603.99	11,669	12,007.78
Krumrei and Combs, Bristow	.....	.....	7,039.13
*Frank L. Ketch, Oklahoma City	2,666.88	.....	3,185.39
*A. J. Kinkade, Shawnee	.....	.....	89,653.80
*Albert Kelly, Bristow	.....	.....	3,303.84
George Kinney, trustee, Tulsa	5,995.48	.....	7,928.60
*W. C. Killgore, Springdale, Ark.	.....	.....	3,067.63
*Helen Walker King, gdn., Orange, Calif.	.....	.....	9,376.53
*Helen Walker King, Orange, Calif.	.....	.....	31,092.42
*Mary Ella Killingsworth, Seminole	34,472.46	.....	46,325.45
Mary Ella Killingsworth, Seminole, (suspense)	14,514.81	.....	19,505.56
*Vernon L. Kiper, Wewoka	2,556.64	.....	3,417.10
*Charles Klein, trustee, Tulsa	7,371.64	.....	7,804.78
C. C. Kimble, Beggs	.....	.....	7,608.09
Kessler Oil Co., Okmulgee	.....	.....	5,652.83
Kanola Corporation, Okmulgee	.....	.....	7,484.66
*Ben Keifer, Sapulpa	.....	.....	7,566.84
*Clyde Kahle, Cyril	.....	.....	6,011.43
*R. F. Knight, Shawnee	.....	.....	3,516.22
*Tom King, Okmulgee	.....	.....	2,270.98
*Ray Keys, Okemah	.....	.....	2,247.62
Knox Petroleum Co., Ardmore	22,140.41	.....	29,376.43
*John C. Kunkel, Jr., Tulsa	.....	.....	1,942.06
*Key Okla. Oil Co., Oklahoma City	.....	.....	2,071.00
*W. S. Key, Oklahoma City	.....	.....	6,609.75
*Mary Etta Killingsworth, Seminole	23,731.74	.....	31,692.96
*Mary Etta Killingsworth, Seminole, (suspense)	9,992.38	.....	13,344.25
*M. G. Kreger, Tonkawa	.....	.....	2,246.67
Charles E. Knox, Enid	.....	.....	14,810.58
Charles E. Knox Oil Co., Enid	.....	.....	2,054.03
Kay Oil Co., Blackwell	5,885.74	.....	14,211.39
*Hugh King, Jr., Tulsa	4,578.66	.....	5,427.46
John L. Kirkland & Son, Tulsa	4,485.97	.....	5,392.23
Kistler Petroleum Co., Tulsa	.....	.....	3,403.19
*Kistler Petroleum Co., Tulsa	47,260.23	.....	$2,770.15

L

LeFlore County Gas & Electric Co., Poteau	.....	488,954	12,612.45
Lawton Corporation, Oklahoma City	1,559.55	.....	4,883.17
Little Fay Oil Co., Tulsa	5,133.44	.....	6,551.06
Little Fay Oil Co., Tulsa	.....	.....	167,008.00
Laurel Oil & Gas Co., Tulsa	42,062.44	.....	53,500.11
A. M. Landon, Independence, Kans.	.....	.....	10,466.27
*A. W. (Wade) Lewis, Ollie, Mont.	.....	.....	6,260.96
*W. T. Laughlin, Oklahoma City	.....	.....	6,259.55
John T. Lindsay, Tulsa	.....	.....	5,456.45
*C. C. Longacre, Shawnee	.....	.....	7,943.20
*C. H. Lebow, Tulsa	8,260.39	.....	10,878.13
C. H. Lebow, Tulsa	2,065.99	.....	2,783.64
*Henry Lytal, Oklahoma City	.....	.....	3,400.39
*A. W. Lewis, Ollie, Mont.	6,242.96	.....	8,903.64
Link Oil Co., Tulsa	13,962.41	.....	18,572.35
*John Lohman, Altus	.....	.....	7,072.49
*LaForce and Ferguson, Lemon, Colo.	.....	.....	3,842.72
*W. H. Livermore, Inc., Chickasha	.....	.....	2,773.20
*W. M. Longmire, Oklahoma City	.....	.....	1,903.90
E. B. Lawson, Nowata	5,538.10	.....	6,759.27
*W. G. Lackey Co., Tulsa	.....	.....	2,028.22
Little Nick Oil Co., Chickasha	.....	.....	10,698.66
T. E. Laselle, Ada	15,970.11	.....	20,400.51
Lone Star Gas Co., Dallas, Tex.	16,679.21	84,862	25,341.06
Louisiana Oil Refg. Corp., Shreveport, La.	.....	.....	49,531.00
*Florence Lindley, Sapulpa	.....	.....	3,979.85
*Bert Lackey, Oklahoma City	.....	.....	2,058.96
Large Oil Co., Bartlesville	4,457.49	.....	5,897.96
Little Ed Oil Co., Tulsa	6,050.25	.....	7,675.28
*Dr. A. W. Longworth, Scarsdale, N. Y.	.....	.....	3,400.31
Nancy J. Laughlin, Cushing	.....	.....	4,672.95
Lyons Petroleum Co., Denver Colo.	23,478.01	.....	38,515.94
*B. D. Lock, Wewoka	.....	.....	5,537.07
*O. L. Lacy, Sulphur	.....	.....	5,326.93

M

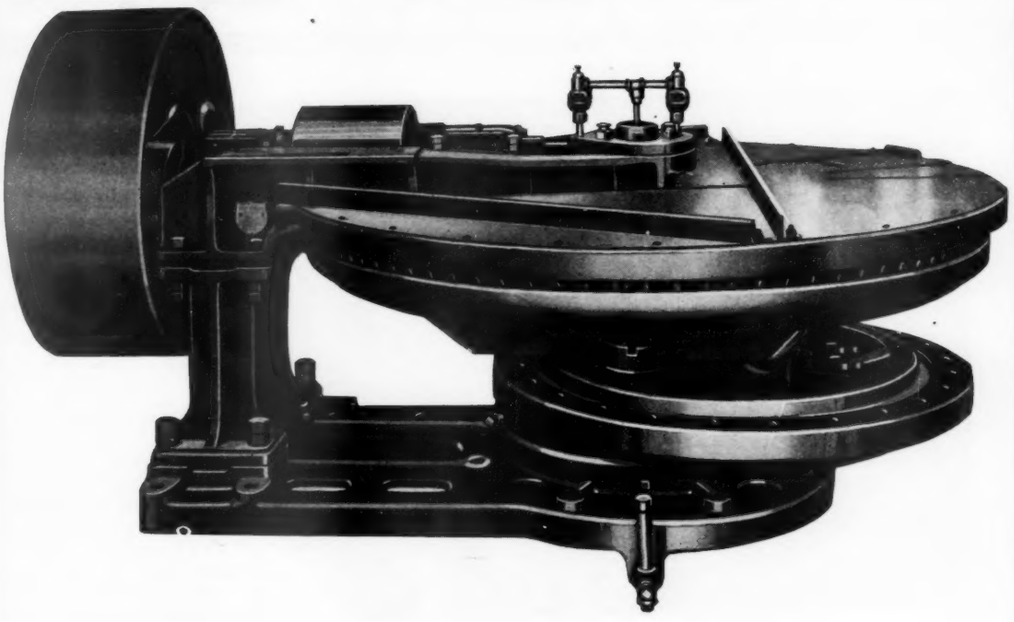
Name and Address—	Barrels	M. Ft. Gas	Amount
Mid-Continent Petroleum Corp., Tulsa	2,147,873.98	.....	2,870,108.99
Mid-Continent Petroleum Corp., Tulsa	.....	Gas	117,093.56
Malernee Oil Co., Oklahoma City	11,257.57	.....	15,099.29
E. R. Minshall, Tulsa	8,511.76	3,339	11,441.21
McMan Oil & Gas Co., Tulsa	80,294.53	.....	108,169.34
*McMan Oil & Gas Co., Tulsa	633.64	.....	846.20
McCulloch Oil Co., Okmulgee	147,456.38	141,501	217,825.45
Minnehoma Oil & Gas Co., Tulsa	333,765.46	334,916	472,236.35
Mul-Berry Oil Co., Cushing	35,924.09	218	68,738.11
Moran-Jackson and Roome, Tulsa	17,534.29	.....	22,204.32
Mohan Oil Co., Tulsa	3,363.20	.....	9,648.32
Marileen Oil & Gas Co., Blackwell	9,583.25	.....	13,007.37
*E. Mullendore, Cleveland	.....	.....	10,334.00
E. Mullendore, Cleveland	.....	.....	8,513.19
E. Mullendore, trustee, Cleveland	.....	.....	118,172.17
*Sarah J. Mullendore, Cleveland	.....	.....	1,995.48
*O. L. Chambers, Tonkawa	.....	.....	19,750.79
Mountain Fork Oil Co., Okmulgee	.....	.....	13,221.26
*W. W. McDonough, Wewoka	.....	.....	32,582.86
*C. L. McMahan, Inc., Tulsa	3,772.01	.....	4,900.73
I. R. McQueen, Oklahoma City	4,005.33	.....	5,413.64
*I. R. McQueen, Oklahoma City	10,093.24	.....	13,548.95
I. R. McQueen, Oklahoma City	.....	.....	7,142.45
*E. H. Moore, Tulsa	3,232.85	7,814	4,821.47
*Albert and Hulda Meier, Enid	.....	.....	2,971.26
*John and Rosa Meier, Winfield, Kans.	.....	.....	2,971.26
C. F. Moseley, Bartlesville	.....	.....	5,524.35
*Alice Clark Myers, Santa Fe, N. M.	.....	.....	7,288.33
*W. H. McVey, Tulsa	.....	.....	2,490.28
*Mid-Continent Royalty Corp., Tulsa	1,772.27	.....	2,335.84
Miller Bros. & Co., New York City	.....	.....	2,895.92
*Mary B. McAlester, Oklahoma City	.....	.....	7,500.57
*W. A. McDougal, Sapulpa	1,912.44	.....	2,763.92
*E. B. Martindale, Muskogee	.....	.....	2,574.28
*Annie Meyer, Sapulpa	.....	.....	7,279.66
*Lizzie Miller, Okmulgee	.....	.....	2,019.09
*William F. McCord, Tarrytown, N. Y., Care of 502 First National Bank, Tulsa	1,414.22	.....	2,257.92
Miller Bros. & Co., New York City	.....	.....	2,113.30
*O. H. Mull, Geary	.....	.....	3,499.30
*Harriett W. Sparks, Earlsboro	24,298.00	.....	29,130.20
*J. E. Monroe, Tulsa	1,770.84	.....	2,463.60
Genevieve E. Moore, Tulsa	3,101.27	.....	4,919.09
*Genevieve E. Moore, Tulsa	.....	.....	234.24
McRoberts Royalty Co., Oklahoma City	4,082.33	.....	5,585.99
*E. G. & C. McCuily, Hennessy	.....	.....	9,474.82
*George M. Mayhue, Ada	.....	.....	70,009.10
*J. M. Malone, Seminole	.....	.....	4,657.02
*H. Mason, Seminole	.....	.....	4,657.02
*M. F. Mainard, Jr., Wewoka	3,704.34	.....	4,827.81
*Berd L. McDonough, Wewoka	.....	.....	1,994.84
*Frank H. Murphy, Tulsa	3,191.70	.....	4,211.16
*E. W. McCrary, Tulsa	2,044.54	.....	2,404.82
Mudge Oil Co., Pittsburgh, Pa.	19,463.96	.....	20,437.12
*W. F. McMechan, Tulsa	.....	.....	2,582.92
*W. C. McIntosh, Okemah	.....	.....	1,970
*Walter W. Morton, Okmulgee	.....	.....	2,216.54
*Carrie L. McClure, McAlester	.....	.....	7,506.57
*S. H. McKee, Tonkawa	.....	.....	6,355.70
*Sophia S. Mussellem, Muskogee	3,284.73	.....	4,026.23
*E. L. Mayes, Earlsboro	.....	.....	20,978.45
F. W. Merrick and R. W. Roe, trustees, Ardmore	17,730.05	.....	21,903.48
J. F. Murphy, Sapulpa	.....	.....	16,155.16
*T. J. McNamara, Seminole	.....	.....	14,187.23
*Bluford W. Miller, Okmulgee	.....	.....	90,473.82
*Villard Martin, Tulsa	.....	.....	1,255.98
*A. J. Mehler, New York City	.....	.....	2,377.20
*R. J. Metcalf, Fort Worth, Tex.	7,099.96	.....	9,778.09
Midland Security Co., Tulsa	5,321.63	.....	6,724.03
*Henry Von L. Meyer, New York City	.....	.....	2,357.30
*J. Read Moore, Wewoka	.....	.....	3,146.39
*J. Read Moore, Wewoka	.....	.....	3,843.38
*Million and Thomas, McAlester	4,365.23	.....	4,785.58
*J. H. Maxey, Oklahoma City	.....	.....	6,735.62
*C. E. McCafferty, Tonkawa	.....	.....	2,171.57
Marland Oil Co., Ponca	917,121.53	.....	1,263,262.27
Marland Oil Co., Ponca	.....	1,820,297	80,763.56
Mid-Kansas Oil & Gas Co., Findlay, Ohio	231,495.63	259,354	316,196.35
Mountain State Oil Co., Bartlesville	23,699.47	.....	30,391.19
Ward S. Merrick, Ardmore	.....	.....	6,092.12
F. W. Merrick, Inc., Ardmore	.....	.....	42,551.12
*T. J. McNamara et al, Seminole	.....	.....	7,043.66
Margay Oil Corp., Tulsa	546,558.32	.....	727,011.78
F. D Misener, Tulsa	8,042.74	54	15,698.17
*Dudley W. Moore, trustee, Tulsa	.....	.....	3,938.25
*Winifield G. Mashburn, Ardmore	1,935.32	.....	2,333.37
*Sarah J. Mahoney, Tonkawa	.....	.....	5,448.89
*Henry McDonald, New York City	.....	.....	9,731.81
*Dudley D. Morgan, Tulsa	.....	.....	2,301.66
Magnolia Petroleum Co., Dallas, Tex.	3,758,073.71	.....	4,467,007.22
Magnolia Petroleum Co., Dallas, Tex.	.....	Gas	144,022.16
*Magnolia Petroleum Co., Dallas, Tex.	77,337.88	.....	97,048.36
*Magnolia Petroleum Co., Dallas, Tex., (suspense)	4,209.00	.....	5,132.36
Magnolia Petroleum Co., Dallas, Tex.	3,895.92	.....	4,753.97
*Magnolia Petroleum Co., Dallas, Tex.	14,683.86	.....	17,824.00
Magnolia Petroleum Co., Dallas, Tex., (suspense)	.....	.....	9,494.77
*Magnolia Petroleum Co., Dallas, Tex.	.....	.....	1,393.91
Magnolia Pet. Co., Dallas, Tex., (Paid under protest)	3,686.82	7,062	4,033.56
Magnolia Pet. Co., Dallas, Tex., (Paid under protest)	52,787.82	19,801	66,463.33
*Marland Employes Royalty Co., Ponca	.....	.....	63,995.04
*W. A. Merkley, Brooklyn, N. Y.	.....	.....	3,161.01
*McRoberts Royalty Co., Oklahoma City	2,810.38	.....	3,753.18
W. C. McBride, St. Louis	.....	.....	4,887.04
*W. C. McBride, St. Louis	.....	.....	2,791.18
Midwest Gas Co., Tulsa	.....	155,592	8,120.19
*W. F. McDaniel, Blackwell	.....	.....	2,511.41
*B. F. Melton, Duncan	.....	.....	6,168.11
D. B. Mason, Tulsa	.....	.....	23,534.53
*John J. Moran, Boston, Mass.	6,270.63	.....	8,161.74
*J. M. MacDonough, New York City	.....	.....	12,717.40
*Monarch Royalty Corp., Kansas City, Mo.	.....	.....	27,349.58
Clint Moore estate, Tulsa	.....	.....	21,472.28
*Mid-Continent Royalty Corp., Tulsa	1,478.77	.....	1,950.64
Midco Oil Corp., Tulsa	19,883.73	.....	26,100.97
C. L. McMahan, Inc., Tulsa	35,458.85	.....	47,989.60
*C. L. McMahan, Inc., Tulsa	28,939.38	.....	38,591.64
*Bluford W. Miller, Tulsa	6,995.07	.....	9,451.94

N

Noble Oil & Gas Co., Tulsa	3,515.10	4,956	4,809.55
*Errett R. Newby, Oklahoma City	.....	.....	2,578.48
New England Oil & Pipe Line Co., Boston, Mass.	126,660.30	.....	167,063.34
*Eva E. Noble, Ardmore	4,245.18	.....	5,330.49
North Counties Gas Co., Ponca City	.....	.....	21,885.90
*Hattie E. Noble, Ardmore	3,183.86	.....	3,996.86
Norwood Oil Co., Tulsa	8,808.68	.....	10,844.40
National Union Oil & Gas Co., Blackwell	.....	.....	9,221.55
*National Union Oil & Gas Co., Blackwell	.....	.....	467.93
National Oil & Development Co., Tulsa	7,671.45	.....	9,117.33
W. C. Norris, Tulsa	.....	.....	15,391.90
Nowata Oil & Refining Co., Tulsa	.....	.....	13,326.61
*New Royalty Co., Ponca City	2,280.09	.....	3,693.65
*R. L. Nelson, Webb City, Mo.	.....	.....	5,260.07
F. M. Nelson, New York City	7,180.76	.....	8,769.33
*A. S. Norvell, Wewoka	.....	.....	6,454.68
Walter Neustadt, Ardmore	.....	.....	6,753.55
*Nester Oil Co., Alex	5,349.06	.....	7,352.57
National Refining Co., Cleveland, Ohio	1,236.19	30,422	5,383.73
*W. A. Norton, Amoret, Mo.	2,913.16	.....	4,151.99
*R. B. North, Blackwell	.....	.....	7,901.98
Chas. F. Noble, Tulsa	.....	.....	14,830.47
Nowata Oil & Refining Co., Tulsa	.....	.....	13,347.24

O

Osage Development Co., Bartlesville	5,583.36	.....	6,898.99
*Ollie B. O'Dell, Richmond, Calif.	11,740.37	.....	15,595.31
Oklavania Oil Co., Tulsa	25,818.88	1,956	32,161.11
*Omega Oil Corp., Shreveport, La.	9,985.74	.....	9,774.89
*Oil State Petroleum Co., Enid	12,126.27	.....	16,419.25



NATIONAL
No. 7
GEARED
POWER

Ask for
Descriptive Bulletin
No. 16 N.

THE
NATIONAL SUPPLY
COMPANIES

COOPER

Empire Gasoline Company's Lacy, Oklahoma, Plant contains eight of the latest type Cooper 170 Horse-power compressor units.

There has never been a year when old customers have stuck so close to Coopers and there never has been a year when so many new companies have turned to Coopers. The explanation is that the comparative value of Cooper Gas Engines and Compressors has been growing steadily greater.

ENGINE BUILDERS FOR NINETY-FOUR YEARS.

THE C. & G. COOPER COMPANY
Mt. Vernon, Ohio

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649 S. Olive St., Los Angeles

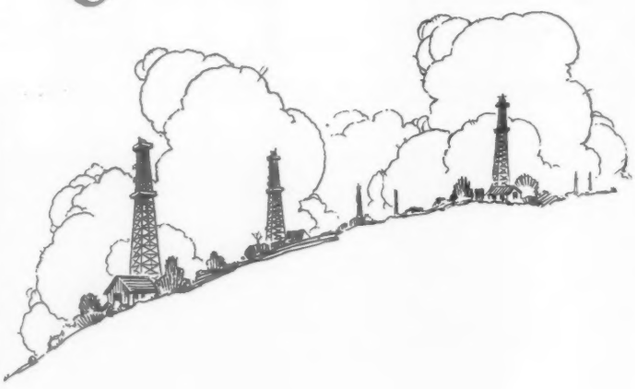
ONCE A COMPANY USES COOPERS THEY SELDOM IF EVER CHANGE

Name and Address—	Barrels	M. Ft. Gas	Amount
Oil State Petroleum Co., Enid	9,320.96	3,203	13,682.06
Owl Oil Co., Loco	5,807.56	.....	6,097.93
Owl Oil Co., Charleston, W. Va.	24,394.33	.....	31,084.81
*Ohio Fuel Oil Co., Tulsa	.....	.....	10,120.47
*Ohio Royalty Co., Tulsa	.....	.....	40,299.27
*S. S. Orwig, Wewoka	.....	.....	18,357.75
Olean Petroleum Co., Bristow	.....	.....	8,233.17
*W. B. Osborn, Ada	.....	.....	77,944.73
Osage Producing Co., Independence, Kans.	305.46	861	6,806.01
Osage Syndicate, Inc., Tulsa	5,827.88	259	28,289.79
Ona Oil Co., Blackwell	11,644.20	182	39,245.36
Oklahoma Natural Gas Corp., Tulsa	.....	Gas	3,918.58
*Mary Severs Owen, Muskogee	.....	.....	2,006.69
*J. M. Oneal, Tecumseh	1,332.31	.....	5,796.02
Robt. Oglesby, Tulsa	.....	.....	4,491.43
*Robt. Oglesby, Tulsa	.....	.....	2,210.45
*Ohio Mid Cities Corp., Wichita Falls	.....	.....	8,743.03
O. O. Owens, Tulsa	.....	.....	10,668.34
O. O. Owens, Tulsa	.....	.....	885.32
Osage Development Co., Bartlesville	5,583.36	.....	6,398.99
Okmulgee Oil & Gas Co., Beggs	.....	.....	5,597.15
P			
Producers & Refiners Corp., Denver, Colo.	79,287.47	.....	105,336.95
Producers & Refiners Corp., Denver, Colo.	.....	129	7,417.18
Pioneer Petroleum Co., Tulsa	16,941.14	.....	20,530.43
Peters Petroleum Corp., Tulsa	59,940.37	121	105,135.72
Phillips and Miliam, Chelsea	23,558.02	3,814	29,535.48
*Dobson Pearson, Cushing	.....	.....	12,750.00
*O. J. Pharoah, Henryetta	.....	.....	8,223.77
*J. C. Parks, Tulsa	.....	.....	2,504.62
*H. A. Pierson, Shawnee	.....	.....	3,877.31
*C. J. Perry, Shawnee	5,620.66	.....	3,333.29
Penmar Oil & Gas, Okmulgee	.....	.....	6,416.58
*S. T. Palmer, Okemah	.....	.....	8,385.15
B. R. Peddycoart, Duncan	.....	.....	4,085.26
Producers Oil Co., Tulsa	8,383.94	.....	10,378.49
Prairie Oil & Gas Co., Independence, Kans.	.....	2,349	144,453.99
Prairie Oil & Gas Co., Independence, Kans.	4,264,218.43	.....	5,672,603.86
Prairie Oil & Gas Co., Independence, Kans.	.....	603	50,576.69
Prairie Oil & Gas Co., Independence, Kans. (trust)	2,953.81	.....	3,674.32
Pure Oil Co., Chicago, Ill.	2,843,753.18	.....	3,802,091.03
Pure Oil Co., Chicago, Ill.	2,934.92	.....	3,758.80
Pure Oil Co., Chicago, Ill.	.....	368	29,803.45
Pure Oil Co., Chicago, Ill.	.....	1,533	50,888.61
Pauline Oil & Gas Co., Oklahoma City	17,791.19	.....	23,231.70
Paraffine Oil Co., Houston, Tex.	9,189.76	.....	11,106.36
Pawnee Oil Production Co., Tulsa	.....	.....	6,034.89
Pawnee Oil Production Co., Tulsa	4,123.04	.....	9,714.02
Pawhuska Oil & Gas Co., Bartlesville	.....	38	6,166.88
Pontiac Oil Co., Sapulpa	.....	.....	9,549.50
Pontiac Oil Co., Sapulpa	.....	.....	45,616.15
*Lillian M. Priboth, Blackwell	.....	.....	2,278.10
*F. F. Priboth, Blackwell	.....	.....	2,272.02
*Mable Dale Potts, Yale	.....	.....	4,788.76
*O. J. Pharoah, Henryetta	.....	.....	5,790.52
L. M. Poe, Tulsa	6,726.69	.....	9,363.18
*N. J. and Alpha Price, Okemah	.....	.....	5,522.43
*P. & H. Co., Oklahoma City	2,654.22	.....	3,335.93
*M. T. Price, Ardmore	.....	.....	2,785.70
*Lucinda Pitman, Muskogee	.....	.....	1,915.20
*J. R. Proffitt, Shawnee	.....	.....	2,096.42
Philmack Co., Tulsa	142,156.50	.....	195,735.11
*Philmack Co., Tulsa	3,839.82	.....	5,313.60
Plymouth Petroleum Co., Tulsa	4,806.94	.....	6,150.75
Plymouth Petroleum Co. et al. Tulsa	6,194.77	.....	8,186.25
Petroleum Investment Co., Fort Worth	5,865.14	.....	5,969.40
*Demetrie Panos, Seminole	.....	.....	2,722.91
*Ed Parker, Wewoka	3,603.59	.....	4,707.51
Charles Page, trustee, Tulsa	4,729.79	.....	6,449.99
W. M. Pugh, Marlow	17,058.66	.....	21,147.06
*P. D. Price and Arizona Price, Okemah	.....	.....	4,087.32
*J. R. Parks, Muskogee	.....	.....	1,828.49
Plover Drilling Co., Tulsa	8,412.55	.....	12,303.74
*C. J. Perry, Shawnee	8,164.48	.....	10,971.76
*R. P. Poland, Ardmore	2,204.62	.....	2,639.42
Plains Petroleum Co., Inc., Tulsa	29,395.71	68,683	39,449.48
H. C. Pounder, Tulsa	4,476.36	.....	5,756.96
W. B. Pine, Okmulgee	44,326.12	.....	73,746.51
*W. B. Pine, Okmulgee	.....	.....	251.24
Pennok Oil Corp., Tulsa	37,049.39	.....	52,492.71
*Perpetual Royalty Income Co., Rock Island, Ill.	1,752.73	.....	2,840.83
Pierce Petroleum Corp., Sand Springs	7,771.45	.....	8,834.12
Pierce Petroleum Corp., Sand Springs	29,825.90	.....	37,952.56
Pierce Petroleum Corp., Sand Springs	.....	11,541	2,590.37
Pierce Petroleum Corp., Sand Springs	.....	16,268	3,961.77
Pierce Petroleum Corp., Sand Springs	4,699.82	.....	6,015.77
*Peerless Oil & Gas Co., Indiana, Pa.	22,292.31	.....	30,056.46
Papoose Oil Co., Tulsa	22,824.72	55,347	34,267.94
Papoose Oil Co., Tulsa	9,225.30	.....	14,697.96
*Provident Royalties Corp., Tulsa	.....	.....	39,997.65
*O. A. Patridge, receiver, Dewey	1,861.11	.....	2,237.44
*Lenora C. Phillips, Bartlesville	1,494.34	.....	2,000.72
Phillips Petroleum Co., Bartlesville	.....	.....	98,562.15
Phillips Petroleum Co., Bartlesville	1,088,715.65	.....	1,419,197.77
Q			
C. P. Quinlan, Tulsa	6,327.51	.....	7,981.75
*Quinton Relief Oil & Gas Co., Quinton	.....	.....	8,546.33
*John Quimby, Montebello, Calif.	.....	.....	13,312.57
R			
Roxana Petroleum Corp., St. Louis, Mo.	.....	1,152,249	49,801.19
Roxana Petroleum Corp., St. Louis, Mo.	1,623,110.94	.....	2,126,312.39
Roxana Petroleum Corp., for Harber "A"	.....	.....	4,066.16
Roxana Petroleum Corp., for G. W. Hearn	.....	.....	2,728.01
*Roxana Petroleum Corp., for R. B. Moss	.....	.....	2,259.55
*Roxana Petroleum Corp., for T. J. Spencer	.....	.....	11,095.24
Roxana Petroleum Corp., for Strothers (suspense)	.....	.....	48,893.58
Youngblood lease, Seminole	.....	.....	4,030.42
*Replogle and Johnson, Oklahoma City	.....	.....	6,388.31
*D. Replogle, Oklahoma City	.....	.....	10,524.89
*Jamie Replogle, Oklahoma City	.....	.....	1,662.75
Rigdon and Bruen, Kansas City, Mo.	.....	.....	5,408.00
Reliance Oil Co., Houston, Tex.	3,943.83	.....	4,769.65
Reliance Oil Co., Houston, Tex.	4,908.67	.....	8,537.38
*L. D. Rickey, Ardmore	2,995.45	.....	3,654.41
C. E. Roth, Independence, Kans.	4,614.41	.....	5,857.71
*Leonard C. Ritts, Tulsa	3,215.02	.....	4,481.59
Regal Oil & Gas Co., Tulsa	7,129.00	.....	9,312.05
Rockland Oil Co., Ardmore	32,914.09	12	37,593.74
*Mabel Ringling, Ardmore	2,765.42	.....	3,240.41
W. S. Randall, Oklahoma City	10,734.16	.....	11,473.70
*Dock Ramsey, Ripley	.....	.....	2,716.62
*Dock Ramsey, Ripley	.....	.....	6,938.59
*A. G. Rogers, Muskogee (suspense)	1,865.47	.....	2,577.53
Ryan Consolidated Petroleum Corp., Bartlesville	8,499.70	2,251	11,372.23
*C. M. Roberts, Okmulgee	2,987.87	.....	6,666.66
*C. M. Roberts, Okmulgee	.....	.....	7,880.00
*John H. Rebold Oil Co., Okmulgee	.....	.....	10,487.86
*August-Rust-Oppenheim, New York City	.....	.....	46,972.23
*Jacob Ruppert, New York City	.....	.....	3,374.57
*A. G. Rogers, Muskogee	.....	.....	4,293.18
*Mrs. F. B. Ryan, Muskogee	.....	.....	1,905.90
*Frank Reed, Seminole	.....	.....	2,479.21
*Dora C. Russell, Duncan	.....	.....	4,339.21
Reed and Harmon, Nowata	5,818.94	.....	7,240.49
Harmon and Glass, Nowata	11,142.59	.....	14,038.70
Harmon, Robertson and Glass, Nowata	3,731.72	.....	4,754.09
*J. R. Recks, Tonkawa	.....	.....	3,965.00
J. W. Robins, Fort Worth, Tex.	6,927.57	.....	8,048.54
*Robt. M. Rainey, Oklahoma City	.....	.....	4,509.85
*Clifton L. Richardson, Tulsa	.....	.....	6,003.62
E. L. Robinson, Tulsa	.....	.....	2,820.69
*Roy Oil Co., Alex	4,345.76	.....	5,382.10
*Thos. C. Roberts, Ardmore	9,210.74	.....	12,560.55
*Thos. C. Roberts, Ardmore	.....	.....	2,150.64
*Isabella S. Reed, Neosho, Mo.	109,149.48	.....	147,559.76
*Frank H. Reed, Neosho, Mo.	109,149.48	.....	147,559.76
*Frank H. Reed, Neosho, Mo.	.....	.....	2,950.07

Name and Address—	Barrels	M. Ft. Gas	Amount
Ramsey Oil Co., Caney, Kans.	2,338.81	.....	4,767.33
*B. B. Ralph, Kansas City, Mo.	4,898.74	.....	6,583.11
*Thos. Ryan, Flanagan, Ill.	.....	.....	12,521.32
*Rena Royalty Co., Tulsa	11,987.43	.....	16,548.87
Riverland Co., Tulsa	183,571.81	8	259,697.70
*Riverland Co., Tulsa	6,051.75	1	7,938.37
*H. T. Riddle, Seminole	.....	.....	3,089.17
*Royalty Investment Synd., New York City	.....	.....	14,714.79
*Thos. Ryan, Wetumka	.....	.....	11,346.95
*B. B. Ralph, Kansas City, Mo.	.....	.....	5,289.37
W. R. and W. E. Ramsey, Oklahoma City	.....	.....	47,589.86
*B. B. Ralph, Kansas City, Mo.	.....	.....	14,550.72
*J. R. Robinson, Tulsa	4,254.14	.....	5,676.02
*Ranola Oil Co., Enid	.....	.....	3,304.51
Ross and Greiss, Tulsa	.....	.....	6,706.35
Red Bank Oil Co., Tulsa	.....	.....	23,298.24
Geo. D. Roberts, Tulsa	7,053.35	.....	9,354.77
S			
Shutzer Bros., Dewey	5,179.14	.....	6,038.98
Elliott and Smith, Tulsa	11,389.97	.....	15,698.78
*A. O. Simpson, Ardmore	5,772.62	322	7,085.71
Simpson Fell Oil Co., Ardmore	38,937.94	4,761	47,899.13
J. R. Simpson, executor, Seminole	.....	.....	35,627.09
Sheridon Oil Co., Tulsa	16,525.97	6	21,956.84
*G. J. Smith, Tulsa	9,477.80	.....	12,819.18
*Sneed Royalty Co., Tulsa	.....	.....	3,463.18
*Howard S. Splane, Tulsa	.....	.....	11,478.08
*Sarasota Oil Co., Ardmore	4,692.16	.....	5,284.91
San Bois Gas Co., Quinton	.....	.....	10,725.00
*Earl Smith, Blackwell	.....	.....	2,305.02
*Steve Smith, Blackwell	.....	.....	2,305.02
*Leona Smith, Blackwell	.....	.....	2,305.02
R. S. Shade, Tulsa	54,453.82	.....	73,250.34
*L. O. Sparks, administrator, Oklahoma City	.....	.....	44,529.45
*Chas. A. Snyder, Sapulpa	.....	.....	2,731.14
*R. E. Sharum et al, Ripley	.....	.....	6,917.67
*Marie A. Sharum, Ripley	.....	.....	4,000.70
*M. R. Stone, trustee, Hawarden, Iowa	3,954.49	.....	4,170.90
Skelton-Moore Oil Co., Bartlesville	6,671.07	.....	8,377.77
*Peter Sukovaty, Bristow	.....	.....	2,176.76
*Lucy B. Scott, Wewoka	.....	.....	2,935.36
Harry Stekoll, Tulsa	.....	.....	5,554.14
Somerville Oil & Gas Co., Muskogee	.....	.....	4,898.03
Quinton Speltzer Co., Quinton	.....	.....	9,497.74
X. K. Stout, Tulsa	13,866.63	.....	17,496.12
Sheldon Houston Oil Co., Tulsa	70,620.67	.....	102,282.34
*L. L. Sturgeon, Wewoka	.....	.....	5,207.66
*Geo. D. Stevens, Corsicana, Tex.	1,196.08	.....	2,125.78
*J. L. Stacy, Chickasha	.....	.....	1,912.22
*N. Bert Smith, Oklahoma City	.....	.....	20,316.90
*John W. and Kate Sartin, Wewoka	.....	.....	7,781.48
*Fred and Willard Sowards, Stroud	.....	.....	4,344.91
*Ira Shimp, Dilworth	.....	.....	7,459.42
*O. B. Surber, Chickasha	.....	.....	3,023.54
*Stacy-Burress and Vaughn, Oklahoma City	.....	.....	4,964.08
*Irene Stanley, Norman	.....	.....	3,786.54
*L. L. Sturgeon, Wewoka	.....	.....	2,736.37
*Wood Staley, El Paso, Tex.	.....	.....	15,711.66
Estate of L. S. Skelton, Okmulgee	2,104.26	.....	7,202.40
*M. F. Steil, Tulsa	.....	.....	2,616.15
C. B. Shaffer, Chicago, Ill.	10,380.16	.....	12,482.29
*Bessie Sanders, Tecumseh	.....	.....	2,823.00
*Gertrude Sanders, Asher	.....	.....	2,323.00
*Mrs. Bettie Simon, Oklahoma City	.....	.....	2,168.07
Simms Oil Co., Dallas, Tex.	22,365.14	31,856	32,683.76
*Skelly Oil Co., Tulsa	.....	.....	4,366.36
*N. Bert Smith, Oklahoma City	.....	.....	16,110.34
*Will H. Smith, trustee, Ardmore	1,650.88	.....	1,958.15
Will H. Smith, trustee, Ardmore	31,440.54	57	42,769.57
*Mrs. Geo. M. Summers, Tonkawa	.....	.....	3,191.51
*O. W. Seay, Ryan	.....	.....	14,630.03
Sure Oil Corp., Tulsa	4,549.44	.....	6,231.79
Superior Oil Corp., Tulsa	122,708.37	125	168,741.62
*R. A. Steinpfad and wife, Shawnee	.....	.....	20,856.43
G. A. Simmons, Okmulgee	.....	.....	13,340.08
M. T. Smith and Son, Oklahoma City	9,758.34	.....	10,430.65
*L. O. Shannon, Stillwater	.....	.....	2,852.46
*Mary and Gus Sevenson, Arkansas City, Kans.	.....	.....	2,536.58
*Clyde W. D. Seay, Oscar	2,140.00	.....	2,662.36
*C. E. Sykes, Ardmore	.....	.....	3,355.99
*S. F. Thompson, Okemah	.....	.....	5,828.73
Robt. C. Sharp, Tulsa	9,512.15	.....	12,667.82
*Robt. C. Sharp, Tulsa	1,729.25	2,261	2,405.93
*Starport Corp., New York City	.....	.....	4,351.72
Sapulpa Refining Co., Denver, Colo.	24,186.79	16,610	33,451.10
M. B. Shufflin, Coffeyville, Kan.	.....	.....	5,184.59
*J. K. D. Shaffer, Oklahoma City	2,643.89	4,595	3,837.49
Skelly Oil Co., Tulsa	.....	346,659	42,896.32
Skelly Oil Co., Tulsa	974,835.30	.....	1,262,389.05
Skelly Oil Co., Tulsa	.....	33,677	3,296.19
*Sun Royalty Co., Tulsa	22,130.28	.....	29,219.37
Sun Royalty Co., Tulsa	27,874.95	.....	40,316.94
*Sun Royalty Co., Tulsa	.....	.....	160.33
Sinclair Oil & Gas Co., Tulsa	2,712,226.24	.....	3,694,142.76
Sinclair Oil & Gas Co., Tulsa	.....	2,216,944	89,748.54
*Sunrise Oil Corp., Oklahoma City	.....	.....	6,396.72
Tom Slick, Inc., Oklahoma City	401,546.05	445,984	556,664.71
*Tom Slick, Inc., Oklahoma City	47,441.18	49	63,603.48
T. B. Slick, Clarion, Pa.	285,499.86	310,028	409,793.83
*T. B. Slick, Clarion, Pa.	23,159.65	28,665	33,878.23
Schermerhorn Ardmore Co., Minneapolis, Minn.	64,627.45	.....	77,566.88
Schermerhorn-Young Co., Minneapolis, Minn.	.....	.....	2,867.39
J. B. Schermerhorn, Inc., Minneapolis, Minn.	87,960.96	.....	108,713.14
*J. B. Schermerhorn, Inc., Minneapolis, Minn.	3,062.30	.....	3,816.80
Schermerhorn Oil Co., Tulsa	4,708.61	40,776	8,504.84
*Herbert Schroeder, Enid	.....	.....	2,971.26
*Paul Schroeder, Enid	.....	.....	2,971.26
*Caroline Schroeder, Enid	.....	.....	2,971.26
*Amanda Schumacher, Orange, Calif.	.....	.....	2,971.26
*M. A. Schroeder, Enid	.....	.....	2,971.26
*Walter Schroeder, Enid	.....	.....	2,971.26
*Oscar Schroeder, Enid	.....	.....	2,971.26
*Henry Schroeder, Enid	.....	.....	4,020.07
*Alice Strough, Davenport	.....	.....	2,541.97
*John Smith, Wetumka	1,872.59	.....	2,176.76
*Anna Sukovaty, Bristow	.....	.....	9,653.89
Sheldon Oil Co., Tulsa	5,465.23	.....	11,454.62
Sidwell Drilling Co., Sapulpa	.....	.....	7,338.75
Sidwell Drilling Co., Sapulpa	7,879.23	.....	569.74
*Sidwell Drilling Co., Sapulpa	.....	.....	19,875.90
Sterling Oil & Gas Co., Abilene, Tex.	.....	.....	17,979.63
South Bend Oil Co., Tulsa	.....	215,956	6,873.98
W. G. Skelly, Tulsa	5,855.48	.....	13,851.13
S. W. Producing Co., Bristow	.....	173,139	21,284.83
Snowden McSweeney Co., New York City	18,093.46	.....	7,085.71
*W. E. Simpson, St. Louis, Mo.	5,772.62	322	7,370.83
I. L. Sheets, Dustin	.....	.....	3,206.31
*Fred and Willard Sowards, Stroud	.....	.....	3,135.94
*Gracie I. Shirley, Tulsa	.....	.....	29,141.35
*Seminole Oil Co., Tulsa	.....	.....	3,507.35
*Selby Oil & Gas Co., Tulsa	.....	.....	49,000.59
Selby Oil & Gas Co., Tulsa	41,876.86	.....	4,711.14
*Theodore Stockdell, Oklahoma City	.....	.....	13,259.82
J. A. Swindler & Son, Muskogee	10,702.76	.....	1,962.00
Edwin Sandford, Oklahoma City	.....	.....	10,621.97
*H. F. Sinclair, New York City	.....	.....	95,943.47
Silurian Oil Co., St. Louis, Mo.	.....	.....	9,000.19
I. D. Simons, Tulsa	.....	.....	3,515.63
*H. J. Spongy, Trousdale	.....	.....	25,330.96
Savoy Oil Co., Tulsa	.....	.....	2,248.83
*Thos. and Lizzie Sewell, Sapulpa	.....	.....	
T			
*J. Frederick Tams, New York City	.....	.....	3,245.12
*Roy B. Thompson, Tulsa	.....	.....	6,937.88
W. M. Thompson, Tulsa	.....	.....	9,999.92
*Nora Taliaferro, Duncan	.....	.....	2,883.90

(Continued on Page 91)

If We're Wrong then the Whole E



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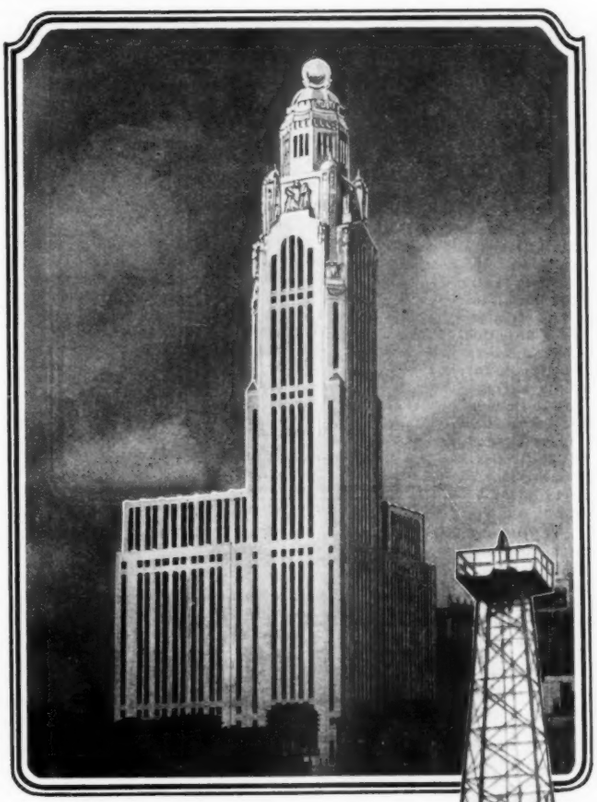

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ROCKY MOUNTAIN AREA

(Continued from Page 59)

33-5-91, failed to get a good shutoff at 4,415 feet, in the top of the Sundance, and had to pull the 4¾-inch, which is being rerun. This well is producing from the Morrison and is making around 200 bbls.

Pipe line construction to handle the Iles production is being considered by the Midwest and Texas companies, but no decisions have been made. The Midwest has filed application for a right of way over Government land from the Moffat Dome to Craig for a 12-mile 4-inch line. It has a 4-inch line from Iles to the Moffat Dome and has been selling its output to the Texas Production Co. The latter has a 4-inch line from the Moffat Dome to Craig. It is probable some joint arrangement for pipe line facilities will be made.

Continental Oil Co.'s No. 1 Robbins, SE cor. SW NE Section 30-19-70, in the west extension of the Florence Pool in Fremont County, is spudding at 60 feet.

On the Rangely Dome, Midwest Refining Co.'s No. 2 Rangely, Section 30-2-102, killed the gas in the Dakota at 3,052 feet and drilled ahead to 3,091 feet, at which depth it is circulating to free the 6¼-inch to lower to bottom. Texas Production Co.'s No. 2 Emerald, Section 31-2-102, is drilling in hard sand at 3,820 feet, and hole is caving. This is presumed to be in the Sundance.

On the Tow Creek structure in Routt County, the Texas Production Co. has a shale well at 2,570 feet in its No. 4 Henry Dennis, Section 17-6-86, the oil standing 700 feet in the hole. It is being drilled deeper.

Wyoming

There were no important completions reported from Wyoming for the week, Salt Creek having none for the first time in several weeks, and those reported from other districts being small wells. The Oregon Basin Field in Park County is now getting into its stride as a result of the completion of the new power line of the Oil Fields Power Co. The ceremonies at which the power was officially cut in took place November 15 when Governor Frank C. Emerson threw the switch in the substation on the south end of the anticline. The substation on the north structure already had been cut in. This completed the first link in an electric power system which will supply an area 36 by 54 miles in size in which are located 14 known structures or producing fields in the Big Horn Basin. The Ohio Oil Co., the Charles E. Orchard, the Wisconsin Holding Co., and the Cody Petroleum Co. wells are now being operated with electric power.

The Cody Petroleum Co.'s No. 1 Klindt, NE Section 7-51-100, picked up a gas sand at 2,036 feet in the Morrison, but it was not tested as the hole was full of water to hold back the pressure. The 10-inch casing was set at 2,085 feet and drilling towards the Embar is proceeding. More gas is expected before it reaches the objective. The same company's No. 1 Garner, NW Section 28-51-101, set the 12½-inch casing at 1,015 feet for a formation shutoff and is drilling ahead at 1,315 feet. Linco Oil Co.'s No. 1, NW Section 33-51-100, which commenced spudding with cable tools on October 10, is drilling at 900 feet. Ferdig-Wyoming Oil Co.'s No. 2 Hough, SE Section 19-51-101, set the 10-inch casing at 1,920 feet and at 2,075 feet was in the Morrison showing considerable gas which was held down with fluid.

Fred G. Ostland's No. 1 Shaw, NW Section 18-51-100, commenced spudding October 15 with a machine and is drilling at 275 feet. Same operator's No. 1 Rousch, Section 9-51-100, is standing with rotary rig completed and with electrical equipment being installed. It is bottomed at 2,086 feet. Producers & Refiners Corp.'s No. 1 Frisby, NW Section 32-52-101, is drilling at 235 feet in blue shale. Same company's location, No. 1 Owens, Section 29-52-100, probably will not be drilled until its other well is completed. Continental Oil Co.'s No. 1-A State, NW Section 16-51-100, is drilling below 1,000 feet. Hoodoo Oil Co.'s No. 1 Frisby, NE Section 36-51-101, commenced spudding with a National machine and will later change over to cable tools or rotary. Wolverine Oil Co.'s No. 1 Rue, SW Section 28-51-100, is drilling with rotary at 461 feet. Ohio Oil Co.'s No. 1 Batson, Section 6-50-100, is drilling at 100 feet, and same company is building derricks in Section 18-51-100 and Section 5-51-100.

Garland Structure

On the Garland structure in Big Horn County, the Utah Southern Oil Co.'s No. 3 Government, NE cor. SW Section 29-56-97, which topped the Sundance sand at 2,261 feet, has drilled through that horizon and is going on down. The Sundance showed saturation at intervals and bailed several barrels, but was not commercial. The producers & Refiners Corp.'s No. 3 Garland, Section 24-56-98, is underreaming to set the 15½-inch casing at 1,080 feet. This is a joint operation with the Kinney-Coastal Oil Co.. The California Co.'s No. 2, NE Section 15-55-97, is down 3,500 feet and probably will be abandoned.

In the La Barge district in southwestern Wyoming, the California Petroleum Corp. has several completions at shallow depths. These wells are finished within a week or two after spudding. This company's No. 2-I, Section 3-26-113, is standing cemented at 1,215 feet. No. 5-F, Section 34-27-113, is landing the 10-inch at 652 feet. No. 4-A, Section 34-27-113, is running 10-inch at 650 feet. No. 3-D, Section 3-26-113, is drilling at 680 feet. No. 7-D, Section 34-27-113, is drilling at 780 feet in sand at 733-80 feet. No. 7-G, Section 34, is standing, and No. 6-J, same section, is rigging up. Rainbow Oil Co.'s No. 7-A cemented the 6¼-inch at 913 feet and entered the pay at 935 feet. It is being completed. Wyoming Producers Oil Co.'s No. 1, SW Section 29-28-113, is drilling in hard lime at 1,675 feet. Goldberg's No. 1, Section 16-27-113, is building rig. This location is 210 feet west and 620 feet south of NE cor. SE NE of this section. W. D. Newlon's No. 1, SW Section 11-29-115, is drilling at 1,435 feet. A. H. Squire's No. 1, NE SW Section 33-27-113, is in sand showing oil and gas at 1,414 feet. The 5⅜-inch is being underreamed to shut off upper water. Texas Production Co.'s No. 1 Davis, NW Section 15-26-113, failed to made a shutoff at 820 feet and will cement again. It had some oil showing at this depth after being deepened from a gas sand. Utah Oil Refining Co.'s No. 1 Davis, Section 10-20-118, has been completed at 1,020 feet with an initial production of 21 bbls.

On the Black Mountain structure, the Utah Oil Refining Co.'s No. 1 Fort Collins, Section 26-43-91, is being abandoned at 3,832 feet. It tested down to the Amsden.

On the Alkali Butte Dome in Fremont County, the Texas Production Co.'s No. 1, SE NW Section 1-33-95, has commenced spudding and is in shale at 30 feet.

In Niobrara County, the Buck Creek Oil Co.'s No. 1 Delahoyde, Section 25-37-63, is still held up at 4,028 feet after passing up 250 bbls. a day on a swabbing test in an upper horizon. It is cleaning out and endeavoring to run 4¾-inch casing to bottom.

Montana

The gas line from the Sunburst Field that is to serve natural gas to Great Falls, is now expected to be ready by Christmas. This line will make the total of cities served with natural gas in Montana 14, and about 20 per cent of the State's population will also be using gas.

The state produces enough gas for all these consumers, but owing to geographical location, three of the main cities and several towns are served by gas imported from Wyoming while 14 cities and towns in North Dakota take gas from Montana fields for their domestic and power uses.

Fire in the Sunburst Field last week did damage estimated at $20,000. A truck driver struck a match near the Cooperative Petroleum Co.'s gas well on the Adams lease and the resulting fire destroyed the rig and nearby buildings. The Hannah Porter well on the Harte lease came in with a flow that went over the crown pulley. The crew had the fire out under the boiler before the oil came but the hot firebrick started a blaze when some of the oil blew over towards the boiler and the fire that resulted blazed 250 feet in the air while a column of oil rose about half that high. About 2 miles north of Shelby, the James Johnson gas well caught from some unknown cause and was a blazing torch for three days before it was put out. All three fires were alight at the same time.

Field work is nearly at a standstill due to the inclement weather of the past few days. Heavy snows were reported from several points in northern and central Montana and a chinook removed the snow from around Havre, but in Sunburst Field the drifts are deep. Only two completions were reported for the past week, Patterson and others brought in a gas well of about 12,000,000 capacity on Section 17-37-4 and the California company has a producer on Section 28-35-2, in the heart of the field that is making 1,500 bbls. daily.

New Pondera Theory

The Pondera Field, south of Conrad, Pondera County, is attracting much attention and a new theory is broached regarding the location of the production in this and other areas of northern Montana. Due to a noticeable alignment of several big wells in the Sunburst Field, a theory of faulting has been worked out and applied to Sunburst and other structures in the northern part of the state.

The Continental Development Co. has started a new well at Pondera in Section 19-27-3, that is located on a fault plane according to this theory and should find oil there. This well is now about 200 feet and production is expected around 1,500 feet. The location is on the Healy Springs extension of the Pondera arch. S. C. Fertig has also built a rig and is ready to start a new hole on Section 23-37-4 west of the Continental well. The Fulton Oil Co. has one well at 150 feet and is putting on the beam and has made two other locations.

In the Bannatyne Field, the Bannatyne Oil Co. is expected to complete the coming week and find the pay at the same level as the discovery well. Should this well find production, it is held the field will prove to a long, narrow belt. The field has five strings of tools active at this time as follows: the Bannatyne Oil Co.'s well on Section 29-6-1, is drilling about 710 feet. The Hardock Oil Co. is drilling on Section 17-25-1, at 100 feet and Elliott and others are at 650 feet on Section 19-26-1. On Section 9-25-1, Lee Dilling and others are at 1,200 feet but have a fishing job and the Fidelity Oil Co. is drilling at 1,250 feet after setting casing on Section 15-26-1.

Dr. Samuel Spitz is experimenting with an instrument said to be capable of determining the depths to the oil sand. Doctor Spitz is conducting his investigations near Great Falls and the Allen Oil Co. is behind the project. The instrument is termed a petrolometer and works on the same principle as the marimeter that tells the depths beneath a ship to the bottom of the sea.

ROCKY MOUNTAIN PRODUCTION

Runs From the Fields	
Wyoming	
Salt Creek	34,610
Teapot	1,110
Big Muddy	2,770
Grass Creek	2,670
Elk Basin	990
Greybull	20
Dutton Creek	20
Notches	170
Rock River	2,630
Rex Lake	130
Lance Creek	1,280
LaBarge	510
Mule Creek	700
Poison Spider	460
Hamilton	610
Osage	310
Lander	960
Pilot Butte	270
Ferris	40
Byron	90
Lost Soldier	2,590
Simpson Ridge	70
Total Wyoming	53,010
Montana	
Cat Creek	1,940
Lake Basin	230
Kevin-Sunburst	11,500
Total Montana	13,670
Colorado	
Florence	794
Moffat	1,461
Fort Collins	2,925
Walden	....
Iles Dome	740
Rangely	100
Tow Creek	457
Boulder	25
Total Colorado	6,502
New Mexico	
Rattlesnake	137
Hogback	290
Cap Rock	101
Table Mesa	....
Artesia	1,267
Total New Mexico	1,795
Total Rocky Mountain	74,977

SOUTHWEST WILDCATS

(Continued from Page 52)

County and close to the Val Verde County line, and later thought he had another close to the north line of Edwards and a half mile from the Val Verde County line. Someone else got a showing of oil due north on the Sutton-Schleicher County line. All three are marked with a green cross on Government maps. Geologists and land men are thick in all three of these counties at this time, leasing everything that looks like possibilities.

In the Laredo territory the Schlessinger Oil Corp.'s No. 1-A Moody in Survey 60 in the northwest part of the County, was a failure at 2,446 feet and is drilling now at 2,635 feet. It set casing to test a sand at 2,396-2,401 feet but the amount of oil was too small and there was some water with it. Another sand at 2,446 feet was tested with a drill stem tester and got 24 fourbles of fluid, 14 of which had about 50 per cent oil and 50 per cent salt water and enough gas that it threw the fluid up into the derrick. Contract depth is 3,000 feet and it will be drilled to that unless it picks up some more sands.

Over in Old Mexico 20 miles south of Roma, Tex., the Mexican Government is still working with its No. 201 Pozo Ferronales at 3,604 feet trying to set a new string of casing and make a well of it but thus far has not succeeded.

Brooks County

The Texas Company's No. 3 Lasater, Survey 329, located 2,380 feet to north line and 450 feet to west line, is drilling at 4,405 feet.

Duval County

Schlessinger Oil Corp.'s No. 1-A Moody, Survey 60, located 155 feet to north line and 1,650 feet to east line, at 2,450 feet drilled through gumbo into new sand and will make drill stem test. National Oil Co.'s No. 1 Ball, Survey 16, located 450 feet to north line and 150 feet to east line, has spudded in and set surface casing.

Hidalgo County

Queen City Oil & Gas Co.'s No. 1 Adams, Lot 1, Block 82, 3 miles north of Mercedes, is fishing at 2,120 feet.

Jim Hogg County

Paesano Oil Syndicate's No. 1 Campbell, Las Vivoritas grant, is drilling at 2,410 feet. O. W. Killam's No. 1 Canales is drilling at 2,500 feet. T. G. Shaw's No. 1 Jones, Survey 381, Block 22, located 300 feet to south and west lines, is rigging up. Holden and others' No. 3 Jones, Share 27, Block 136, is standing at 2,548 feet.

Starr County

Clark & Woodrugg's No. 1 Kelsey, Porcion 76, is standing at 200 feet. J. E. Harston's No. 1 H. Guerra, Survey 43, located 660 feet to south line and 1,320 feet to east line, is standing at 300 feet waiting on fuel oil. T. W. Foltz and others' No. 1, Survey 301, located 150 feet to northwest lines and 2,400 feet to west lines, is rigged up.

Zapata County

Henne, Winch & Fariss' No. 1 A. Martinez, Survey 120, located 1,391 feet to east line and 2,025 feet to south line, is drilling at 1,902 feet.

Bexar County

Allen Burnam's No. 1 Ward, A. A. Gardiner Survey, 1,200 feet to east line and 325 feet to south line, is shut down at 318 feet.

Bastrop County

Noack & Laning's No. 1 Boemer, Isaac Casner league, 150 feet to NE cor., is drilling. Fred Adams' No. 1 Roberts, J. B. Blalock Survey, 1,426 feet to north-

(Continued on Page 135)

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The completion of the addition to our present building increases the size of our Tulsa Office and Warehouse fully 50%. This expansion was necessary because of the enlarged facilities needed by our organization to adequately serve the Mid-Continent territory.

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Deal Direct with the Manufacturer

OKLAHOMA PRODUCTION, THIRD QUARTER

(Continued from Page 85)

Name and Address—	Barrels	M. Ft. Gas	Amount
*M. E. Templeton, Phoenix, Ariz.	.....	.....	38,954.05
C. G. Tibbens, Tulsa	.....	.....	53,733.74
*Vida M. Tull, Yale	7,376.10	.....	9,965.10
*C. F. Turner, Shawnee	.....	.....	6,555.43
*David P. Thornton, Muskogee	.....	.....	2,944.99
*F. E. Tucker, Ardmore	2,140.51	.....	2,710.83
Transcontinental Oil Co., Tulsa	124,565.17	281,027	169,781.19
Tidal Osage Oil Co., Tulsa	.....	.....	38,828.35
Tidal Osage Oil Co., Tulsa	.....	.....	21,757.05
Tidal Osage Oil Co., Tulsa	670,288.30	.....	883,736.30
Thompson and Black, Inc., Tulsa	5,698.67	68	19,763.53
R. H. Todd, Wewoka	.....	.....	5,729.66
*Twin State Oil Co., Tulsa	6,595.25	.....	8,882.87
Twin State Oil Co., Tulsa	837,703.09	281,480	977,314.46
*Hudson Talbot, Okmulgee	.....	.....	1,875.39
The Texas Company Producing Dept., Tulsa	2,175,210.97	.....	2,891,069.21
*The Texas Company Producing Dept., Tulsa	20,870.89	.....	29,427.53
The Texas Company Producing Dept., Tulsa	.....	Gas	87,132.68
Texas Pacific Coal & Oil Co., Thurber, Tex.	56,294.99	6,422	63,680.21
Tiger Mountain Oil Co., Tulsa	3,914.31	50,201	7,880.57
Tiger Petroleum Corp., Tulsa	6,933.35	7,998	9,051.52
*A. M. Thomas, Tonkawa	.....	.....	6,886.66
*Thos. E. Toney, St. Louis, Mo.	.....	.....	2,510.76
*M. E. Templeton, Phoenix, Ariz	.....	.....	1,905.65
H. H. Taylor, Tulsa	.....	.....	251,017.19
*C. A. Tilghman, Oklahoma City	1,780.19	.....	2,147.46
Thompson Oil & Gas Co., Tulsa	4,729.16	1,033	6,146.62
*Ella Treadway, Seminole	.....	.....	2,127.21
Tidal Oil Co., Tulsa	683,204.63	.....	877,119.32
*Tidal Oil Co., Tulsa	.....	Gas	615.24
Tidal Oil Co., Tulsa	.....	Gas	26,235.41
*Tidal Oil Co., Tulsa	11,631.93	.....	13,698.03
Thlocco Oil Co., Tulsa	12,065.77	.....	17,181.70
*J. N. Thompson, Tulsa	1,453.29	.....	1,973.89
Turman Oil Co., Tulsa	6,022.98	106	7,008.15
*Turman Oil Co. (by receiver), Tulsa	164,583.23	62,775	217,262.48
U			
Flored S. Ursel, Oklahoma City	4,962.31	2,482	7,184.25
*Flored S. Ursel, Oklahoma City	.....	.....	414.73
*United Royalty Co., Newkirk	.....	.....	1,992.28
*J. B. Umpleby, Oklahoma City	2,827.29	.....	3,961.40
Union Oil & Mining Co., Tulsa	5,392.22	.....	7,378.68
United Eight Oil Trust, Madill	.....	.....	11,737.58
*United Royalties Corp., Wichita Falls	1,619.21	.....	1,942.25
C. F. Urschel, Oklahoma City	4,962.31	2,482	7,184.25
*C. F. Urschel, Oklahoma City, Okla.	.....	.....	414.73
W. L. Umburn, Weleetka	.....	.....	10,588.17
V			
*Leon G. Voorhees, Oklahoma City	17,630.16	1,656	22,844.37
*Amanda Vassar, Tulsa	.....	.....	3,942.76
*S. E. Vance, Tulsa	3,170.53	.....	4,376.96
Vernon Oil & Gas Co., Blackwell	12,475.74	6,945	17,035.60
*W. F. Varnum, Seminole	11,700.92	.....	15,553.36
*W. F. Varnum, Shawnee	15,807.22	.....	21,363.26
*Sam K. Viersen, Okmulgee	20,003.47	.....	26,924.95
*Sam K. Viersen, Seminole (suspense)	21,373.01	.....	28,499.12
Valley Osage Oil Co., Tulsa	.....	.....	28,606.11
W			
*Roy Wood, Oklahoma City	.....	.....	19,224.16
*E. A. Walker, Oklahoma City	23,800.04	17,836	30,469.25
May M. Walker, Oklahoma City	.....	.....	1,492.60
Ward Oil & Gas Co., Tulsa	6,930.71	.....	8,578.14
*L. C. and J. L. Waltman, Stillwater	.....	.....	7,847.29
*C. D. Williams, Ardmore	.....	.....	2,571.68
Geo. S. Wilson, Muskogee	.....	.....	13,062.76
*Jessie May Wilson, Shawnee	.....	.....	4,990.45
*Flossie E. Wilcox, Melrose Park, Ill.	.....	.....	4,990.45
Whitehill Oil Corp., Tulsa	.....	.....	5,046.76
*H. Z. Ward, Heavener	.....	.....	5,091.98
Watchorn Oil & Gas Co., Oklahoma City	42,754.28	.....	57,226.09
*E. W. Whitney, Wewoka	.....	.....	96,375.05
*K. S. Woolery, Dallas, Tex.	25,363.93	.....	33,571.19
*K. S. Woolery, Dallas, Tex.	.....	.....	1,571.72
J. H. Wright, Sapulpa	.....	.....	36,392.97
L. W. Winkler, Duncan	.....	.....	7,142.45
Winkler and McQueen, Duncan	.....	.....	43,856.85
H. F. Wilcox Oil & Gas, Tulsa	406,624.29	.....	533,629.03
*H. F. Wilcox Oil & Gas, Tulsa	2,712.61	.....	4,470.69
Wittmer Oil & Gas Properties, Pittsburgh, Pa.	6,963.57	10,096	9,807.89
Wolverine Petroleum Corp., St. Louis, Mo.	209,479.39	.....	246,890.15
Wolverine Petroleum Corp., St. Louis, Mo.	.....	347,781	15,857.11
Westheimer and Daube, Ardmore	98,654.88	587,659	131,382.90
*Westheimer and Daube, Ardmore	16,754.83	.....	20,286.23
Warner-Caldwell Oil Co., Titusville, Pa.	26,540.19	.....	34,496.92
Wood Oil Co., Tulsa	.....	.....	16,286.00
Wiser Oil Co., Bartlesville	84,098.37	.....	103,348.42
*Washington Royalties Co., Bartlesville	7,326.01	.....	10,478.39
Wentz Oil Corp., Ponca	1,220.89	.....	1,629.90
Wentz Oil Corp., Ponca	253,012.03	.....	376,556.21
L. C. and J. L. Waltman, Stillwater	.....	.....	11,059.78
Wigton and Long Co., Okmulgee	.....	.....	24,799.00
Winona Oil Co. of Delaware, Tulsa	45,127.96	.....	87,825.45
Western Oil Corp., Tulsa	.....	.....	5,089.15
*Whitehill Oil Corp., Tulsa	1,619.46	.....	2,429.75
Whitehill Oil Corp., Tulsa	4,953.25	.....	6,249.70
C. W. Waters by The Texas Company, Tulsa	1,657.78	.....	2,647.95
James Wood, New York City	.....	.....	6,896.05
*Elmer T. and Edward E. Wagner, Cement	.....	.....	2,036.97
*E. E. Westervelt, Oklahoma City	.....	.....	2,331.00
E. E. Westervelt, Oklahoma City	.....	.....	8,649.62
J. Carter Walker, Orange, Va.	.....	.....	2,206.39
*C. C. Walker, Okemah	.....	.....	7,354.77
Wah-Shah-She Oil Co., Bartlesville	3,826.01	.....	4,970.05
Westland Oil Corp., Tulsa	37,545.33	31	51,483.67
White Eagle Oil & Refining Co., Wichita, Kans.	5,499.40	162,192	8,260.13
*Leona Love Wilson, Sapulpa	.....	.....	2,894.38
Western Royalty Co., Tulsa	2,006.82	.....	3,704.57
*C. W. Wolcott, guardian, Coweta	.....	.....	5,002.84
*C. O. White, Okemah	2,028.17	.....	2,743.64
*C. O. White, Okemah	.....	.....	8,532.67
Wrightsman Petroleum Co., Tulsa	1,996.18	.....	2,448.81
*Louis Windler, Enid	.....	.....	3,353.48
Westerly Oil Co., Bartlesville	4,396.71	.....	5,910.86
*T. O. Williams, Tonkawa	.....	.....	2,478.70
Walsh Oil Co., Tulsa	6,260.53	.....	7,732.29
*J. L. Welsh, Blackwell	.....	.....	3,612.95
*Ruth Welsh, Blackwell	.....	.....	3,284.55
*H. E. Williams, trustee, Muskogee	.....	6,036	6,036.63
Wellsville Oil Co. et al, New York City	.....	.....	5,108.67
*John W. Willmott, San Diego, Calif.	.....	.....	5,695.02
*W. W. Wolfe, Tulsa	1,563.78	.....	2,083.98
*Wolfe Oil Corp., Bristow	8,292.69	.....	11,420.95
*Louis H. Walker, Santa Ana, Calif.	.....	.....	2,310.46
*James Wright, Bristow	.....	.....	7,163.47
*E. L. Worrell, Ryan	1,253.74	.....	2,938.70
*Ivin F. Wilson, Wewoka	.....	.....	5,222.87
*W. E. Woods, Cox City	.....	.....	5,454.45
*H. L. Wood, agent, Morris	.....	.....	2,734.70
Y			
*J. Wright Young, Broken Arrow	1,970.00	.....	2,533.51
York Oil & Gas Co., Muskogee	3,986.86	.....	5,875.96
*J. B. Yount, Tonkawa	.....	.....	3,175.19
Youngblood lease, Seminole	.....	.....	4,030.42
Z			
Zola Oil Co., Tulsa	17,967.62	.....	21,976.26
*Effie M. Zollars, Lincoln, Ill.	.....	.....	2,011.23
*A. J. Zachary, Marlow	.....	.....	3,498.16

TEXAS GROSS PRODUCTION REPORT FOR THIRD QUARTER OF THIS YEAR

Gross crude oil production in the State of Texas increased approximately 4,000 bbls. daily during the third quarter of this year as compared to the second quarter, according to reports filed with the State Auditor at Austin for taxation purposes. These reports show a total gross production of 51,269,306.7 bbls. for the third quarter as compared to 50,917,225.7 for the second quarter, an increase of 352,081 bbls. However, the value of the oil produced during the third quarter was $3,048,789.55 less than the value of the gross production in the second quarter, the figures being $58,661,742.04 for the second quarter and $55,612,952.49 for the third quarter. The report for the third quarter, compiled from records in the State Auditor's office, follows:

GROSS RECEIPTS TAX REPORTS ON CRUDE OIL PRODUCTION FOR THE QUARTER ENDING SEPTEMBER 30, 1927

Name and Address—	Barrels	Value
A		
Alamo Oil Co., Brownwood	657.00	$ 840.00
Arnold & Frazier, Putnam	464.60	634.82
Arnold & Frazier, Putnam (6-30-27)	477.04	651.95
Amicable Life Insurance Co., Waco	325.00	462.00
Adams, Walter B., Burkburnett (6-30-27)	604.44	726.32
Adams, W. B., Burkburnett (6-30-27)	550.33	564.49
A. & P. Production Co., Houston	34,085.44	42,189.28
Anchor Oil Co., Dallas	1,567.49	2,022.06
Agate Brothers, Eastland	144.00	178.00
Abraham, Earl, Bridgetown	205.24	268.40
Amarillo Oil Co., Amarillo	1,673.25	1,439.00
Anderson & Bearman, Cisco	5,100.89	7,679.87
Artex Oil Co., Wichita Falls	2,560.04	3,477.87
Amerada Petroleum Corp., Tulsa, Okla.	189,982.68	206,891.56
Andrews, W. R., et al, Putnam	2,012.72	2,642.20
Arco Oil & Gas Co., Baltimore, Md.	10,110.40	12,898.83
Associated Oil Co., San Francisco, Calif.	31,147.30	32,559.21
Atkinson & Sandefer, Breckenridge	17,807.12	23,340.63
Ashe Syndicate, The, Fort Worth	1,114.08	1,455.70
Ascot Co., The, Wichita Falls	9,204.03	13,449.45
American Well & Prospecting Co., Corsicana	34,663.92	34,663.92
American Refining Co., Inc., Wichita Falls	33,833.74	36,723.95
All-American Oil & Gas Co., Oklahoma City	50.97	66.67
Apple-Brandeberry Oil Co., Wichita Falls	12,967.17	17,687.19
Ailes, J. W., Wichita Falls	950.25	1,273.33
Alonco, Jr., Oil Producers, Laredo	1,702.05	1,702.05
Applemen, H., Tulsa, Okla.	32.80	44.73
Arkansas Fuel Oil Co., Pittsburgh, Pa.	8,312.53	10,848.91
Apex Oil Corp., Amarillo	16,865.06	14,177.35
Atlantic Oil Producing Co., Dallas	1,581,321.91	1,223,514.89
Ardcona Oil Corp., Ardmore, Okla.	1,606.39	2,012.80
Andrews Petroleum Corp., New York, N. Y.	63.58	6,730.60
Alamosa Oil Co., Amarillo	44,545.70	31,618.06
Abercrombie, J. S., Co., Houston	110,436.98	130,516.52
Atlantic Keystone Petroleum Co., New York, N. Y.	1,846.36	1,846.36
Altas Oil Corp., Humble	4,229.00	5,075.00
Acorn Oil Co., Beaumont	7,954.94	9,545.93
Alaska Petroleum Co., Amarillo	800.00	600.00
B		
Bynum, W. W., Rockdale (6-30-27)	1,651.22	2,301.31
Bailey-Damuth Drilling Co., Wichita Falls	936.73	1,225.87
Bowman Oil Co., Rockdale	2,184.39	1,339.28
Baird Oil Co., The, Moran	462.54	618.19
Babcock, Scheurer & Schlaffke, Electra	168.61	224.81
Big 4 C. M. Oil Co., El Paso	235.78	306.53
Biel, William N., Van Ormy	.40	48.80
Bass & Dillard, Wichita Falls	2,362.20	3,248.06
Black Cat Oil Co., Electra	1,380.63	1,832.43
Baker, J. A. and Mollie B., Breckenridge	93.48	12,340.00
Boller, C. W., Wichita Falls	8,900.11	12,098.37
Blue Bonnet Petroleum Corp., San Antonio	1,308.67	1,558.76
Burton McKee Oil Corp., Strawn	238.78	363.24
Britton, Gordon & Wickens, Strawn	703.76	957.11
Black Diamond Oil Co., The, Amarillo	557.74	490.83
Brooks & Hanlon, Inc., Tulsa, Okla.	712.47	917.01
Brown, Mrs. Carrie L., et al, Orange	26,269.50	31,523.40
Brown, Dr. E. W., estate, Orange	3,187.48	3,824.98
Burk-Venus Oil Co., Dallas (6-30-27)	.....	.....
Buckeye Development Co., Columbus, Ohio	.....	.....
Biggs Oil & Gas Co., McKinney	12.75	1,750.00
Bynum, W. W., Rockdale	1,562.41	2,093.62
Brinkley Fronings Refining Co., Pittsburgh, Pa.	712.39	914.95
Bevering, A. H., et al, Henrietta	1,920.20	2,259.78
Bartlett Co., William, Electra	560.52	773.45
Barbara Oil Co., Oklahoma City, Okla.	14,512.74	20,170.86
Boyd, E. W., Bartlesville, Okla.	.39	49.92
Brannon & Murray, Cisco	28.20	3,892.50
Basham, C. E., Wichita Falls	42.00	53.86
Burke-Greis Oil Co. and Burke-Greis Oil Co. & Gwinnup, Tulsa, Okla.	5,835.57	8,155.54
Beams, Drew, Okmulgee, Okla.	811.44	1,071.10
Burkburnett Production Oil Trust, Baltimore, Md.	1,115.90	1,572.29
Brown & Co., Inc., Cisco	2,348.97	3,143.45
Bartlett Production Co., Rockdale	3,674.34	4,923.61
Beaver Oil Corp., Oklahoma City, Okla.	19,506.74	17,001.64
Bleakley & Kinnison, Wichita Falls	1,074.77	1,389.55
B-K Oil Co., Inc., Austin	1,653.70	1,653.70
Bashara, J. F., Houston	14,960.69	18,478.52
Belva Oil Co., Eastland	39,036.98	58,622.22
Baldwin, F. C., et al, Fort Worth	1,972.28	2,711.76
Bryan Oil Corp., Houston	1,703.43	2,251.93
Brazos River Gas Co., Wichita Falls	264.06	328.69
Big Lake Oil Co., Pittsburgh, Pa.	1,656,053.72	1,848,280.18
Birk, C. E., and C. L. Kelley, Iowa Park	223.78	296.35
Buchanan, S. R., Batson	13,560.77	16,272.92
Barkley & Meadows, Wichita Falls	85,964.29	114,756.15
Barkley & Meadows, Wichita Falls	186.49	242.43
Barkley & Cro.ty, Ranger	7,409.47	9,911.54
Barkley, Crotty, Six & Little, Ranger	3,100.29	3,968.35
Barkley & Conway, Ranger	8,736.60	12,413.34
Broughton, S. J., Brownwood	1.02	13.50
Bridwell & Mayfield, Wichita Falls	12,745.34	17,693.02
Bynum & Palmer, Rockdale	313.83	403.26
Boy Oil & Gas Co., Mirando City	1,195.96	1,195.96
Baker Oil Co., The, Houston	2,024.93	2,429.92
British American Oil Prod. Co., Wichita Falls	12,531.99	17,040.29
Big Indian Oil & Development Co., Gainesville	796.26	1,393.46
Bridwell & Heydrick, trustee, Wichita Falls	6,118.41	8,233.60
Bridwell & Heydrick Oil Co., Wichita Falls	92,963.19	127,821.39
Breckenridge Gasoline Co., Toledo, Ohio	314.68	400.15
Badger Oil Co., Amarillo	8,480.09	7,116.17
Borealis Oil Co., Oklahoma City	3,373.38	4,452.86
Barnsdall Oil Co., Tulsa, Okla.	61,482.89	70,457.60
Braden Co., The, Eastland	2,706.65	3,947.27
Brownwood Prod. & Ref. Co., Brownwood	2,189.99	2,899.22
Burns & Maxson, Wichita Falls	6,023.60	8,076.86
Burns, L. T., Wichita Falls	112,628.30	152,507.77
Bonchil Co., Inc., Wichita Falls	6,165.62	8,701.92
Bonner, et al, J. H. S., Wichita Falls	3,841.16	5,268.85
Belle, Ada Oil Co., Batson	23,939.58	28,960.95
Bohner, C. J., Burkburnett	5,272.35	7,322.37
Black-Pearson & Hudson, Corsicana	6,322.19	6,322.19
Blair & Kell, Dallas	1,456.07	1,847.08
Bullington, Lee, Pendleton & Bullington, Wichita Falls	10,675.56	14,345.74
Barkley, T. C., Sour Lake	1,899.44	2,279.33
Brady Brothers, Minerva	3,783.63	4,856.76
Bashara & Sons, Wichita Falls	7,395.47	9,003.40
Bashara & Bashara, Waco	2.77	389.40
Bradstreet, L. G., Fort Worth	19,959.95	27,199.83
Broderick, A. J., and C. L. Perrin, Fort Worth	381.36	499.58
Bexata Oil Co., San Antonio	1,882.97	2,253.25
Borman, T. J., Cisco (6-30-27)	1,723.71	2,240.52
Borman, T. J., Cisco	1,610.84	2,074.09
Bashara Oil Co., Wichita Falls	3,347.18	3,854.12
Buckeye Pipe & Supply Co., Breckenridge	207.84	271.31
Bailey, Fannie, Wichita Falls	1,116.63	1,369.28
Booth Oil Co., Olney	335.00	432.30
C		
Crosscut Corp., The, Fort Worth	3,954.61	4,837.05
Carter, Roy L., Wichita Falls	408.11	587.74

F-M Ball Bearing Construction

in a two-speed motor for oil well service

HERE is a motor designed expressly for oil-well pumping and pulling and embodying the famous F-M *ball bearing* construction. An advanced ball bearing motor—in which every detail is built to withstand the hard service conditions to which this type of motor is exposed.

Tightly sealed bearings are protected from dirt and moisture. Insulation is moisture-proof. Construction is exceptionally sturdy and rigid throughout.

A wide speed variation is provided—300 to 1200 r.p.m. for the 15-35 hp. motor and 225 to 900 r.p.m. for the 20-50 hp. motor. The motor is the wound rotor type with six slip rings and four brushes resting on each ring—thus assuring greater reliability. Two sets of connections to the stator, in conjunction with a pole changing switch, give two combinations of the poles—one for low speed, low horsepower; the other for high speed and high horsepower.

As in all Fairbanks-Morse *Ball Bearing* Motors, F-M ball bearing construction does away with the main cause of ordinary motor failures. Shaft wear is entirely eliminated. There is no appreciable wear on the bearings under heavy belt tension or other severe running conditions. The rotor remains accurately centered, and burnouts which might result from the rotor dropping down or scraping on the stator are prevented. Large grease-packed bearing housings reduce lubrication to a simple re-greasing operation done only once or twice a year.

The controller used with this motor is particularly simple and foolproof, and provides nine points of speed control, both forward and reverse, with each set of connections.

Send for bulletin describing this newest addition to the wide line of F-M motors for oil-field service.

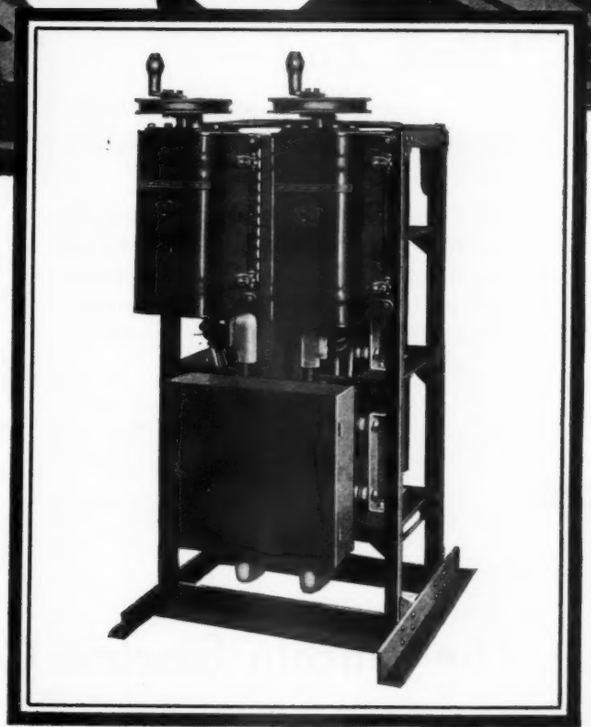
FAIRBANKS, MORSE & CO., Chicago

28 branches throughout the United States at your service

FAIRBANKS-MORSE

Pioneer Manufacturers of

ball bearing motors



Special Features of the F-M Ball-Bearing Two-Speed Motor

1. Ball bearings eliminate shaft wear and are not affected by ordinary belt tension.
2. Ball bearings maintain alignment of rotor and uniformity of air gap necessary for high efficiency.
3. Ball bearings require greasing only once or twice a year—practically self-oiling.
4. Bearing housings exclude dirt and moisture.
5. Sturdy frame construction with broad solid feet to facilitate rigid mounting.
6. Extra heavy shaft to withstand undue belt tension.
7. Moisture-proof insulation.
8. High starting torque with low current consumption.
9. Fourteen speed variations between 25 per cent and full speed.
10. Reversible controller with interlocking and protective relays, and "stop and start" button, providing complete control from the "headache post."

AEA 02.2

Pop quotes an old proverb

"Here, Lad—

I want you to go over all our equipment and make a report on it.

We want to make all the repairs now that we can because we're in an era when we have to conserve in buying new equipment. You know too, "a stitch in time."

"Yes, Pop—

but why should we be forced to take the stitches?

If the manufacturers of our equipment had put in the stitch at the proper time we wouldn't be out on our leak-plugging hunt.

They are the ones that should keep abreast of developments aimed to keep down breaks in production.

I see by the Arc Welding Text Book (at the left) that many producers of refinery equipment have gotten away from rivets and threads, that eventually leak, by "Stable-Arc" welding their equipment.

It you continue to buy equipment from old line manufacturers—you'll have to get them to throw in a "Stable-Arc" welder so that we can put the finishing touches on their manufacturing attempt."

A new textbook on Arc Welding (Price $1.50) will be sent on approval for five days to any executive requesting it.
Book size, 6"x9"—Total pages, 160—Number Illustrations, 200—Charts, 62—Divisions, 8.

The Lincoln Electric Co., Dept. 26-11, Cleveland, Ohio

"Stable-Arc" LINCOLN WELDER

W-20

Name and Address—	Barrels	Value
Carter, Roy L., Wichita Falls (6-30-27)	773.85	1,023.40
Homer Chapman Oil Co., Dallas (3-31-27)	1,126.49	1,507.69
Homer Chapman Oil Co., Dallas (7-1-27)	10,370.48	13,953.97
Clara Oil & Prod. Co., Beaumont (3-31-27)	263.70	358.76
Clara Oil & Prod. Co., Beaumont (6-30-27)	341.03	409.23
Cole, W. C., Wichita Falls	1,059.06	1,440.33
Clay, J. D., Houston	3,650.38	4,284.68
Caldwell, John W., Wichita Falls	1,976.48	2,681.99
Canady, Roy, Corsicana	670.05	763.85
Clara Oil Co., Wichita Falls	427.39	572.02
Camp Oil & Gas Co., The, Wichita Falls	4,887.39	6,089.72
Carter, Roy L., Wichita Falls	963.96	1,299.51
California Co., The, Colorado	3,042.00	320,316.54
Clear Creek Oil Co., Brownwood	307.20	387.63
Collier, J. W., and Mrs. Mabel Markley	7.12	879.18
Craig & Lowrie, Pittsburgh, Pa.	838.92	939.59
Continental Supply Co., The, St. Louis, Mo.	465.97	522.22
Chartu Oil Co., Brownwood	29,803.86	40,775.85
Coffey & Schlaffke, Electra	158.08	211.82
Cosa Oil Co., Cisco (6-30-27)	589.27	821.51
Cosa Oil Co., Cisco (6-30-27)	503.27	701.84
Conway Brothers and Gholson, Ranger	615.32	818.43
Collins & Co., J. L., Corsicana	12,277.98	12,556.17
Church-Weekley-Fields et al, Odessa	197,119.59	125,006.10
Caruthers Co., San Antonio	2,176.89	2,568.59
Corlett, W. B., Wichita Falls	494.11	682.14
Chestnut & Smith Corp., Tulsa, Okla.	155.59	198.81
Clear Lake Oil Co., Rockwall	3,144.75	4,206.11
Col-Tex Oil Co., Spokane, Wash.	5.09	590.44
Clark, R. R., Wichita Falls	15,825.35	21,284.13
Cornhusker Oil Co., Lincoln, Neb.	3,577.28	3,577.28
Caldwell-Guadalupe Pick-Up Stations, Inc., Luling	2,087.70	2,087.70
Carteret Oil Corp., Jersey City, N. J.	1,140.26	1,524.74
Curtis, James A., Wichita Falls	3,668.44	4,990.94
Center Field Oil Co., Amarillo	434.70	326.03
Chapman, O. H., Waxahachie	292.65	378.80
Cox, Edwin B., Ardmore, Okla.	2,541.17	3,214.66
Cashdollar & Snyder, Brownwood	337.88	362.12
Curry, E. M., Rising Star	3,077.35	4,148.39
Capitol Oil Co., Orange	3,765.96	4,544.15
Cook & Reeder, Wichita Falls	5,779.72	8,151.27
Castlebury, S. A., Vernon	564.78	719.43
Cohen & Lebow Trust, Baltimore, Md.	165.94	220.29
Cohen, Aaron, Baltimore, Md.	7,569.13	10,543.44
Cisco Oil Co., Tulsa, Okla.	41,026.98	52,106.85
Crenshaw, Albert, Wichita Falls	5,589.29	7,500.68
Coons, W. H., and Hal G. Hotchkiss, Graham	10,400.99	12,726.24
Continental Oil Co. of Texas, Wichita Falls	790,056.09	982,417.03
Cockrell-McIlroy Oil Co., Amarillo	196,250.56	177,476.19
Cline, W. D., et al, Wichita Falls	493.12	665.71
Crown Oil & Refining Co., Houston	17,437.87	20,925.44
Crown Central Petroleum Corp., Houston	86,250.01	86,250.01
Conden, J. S., Inc., Fort Worth	20,183.17	25,955.56
Chapman, Homer Oil Co., Dallas	9,031.14	12,264.59
Church & Fields, Midland	26,436.25	17,065.84
Coppock & Coleman, Iowa Park	3,141.31	4,171.43
Coppard, M., trustee in bankruptcy of Frio Oil Co., San Antonio	367.63	362.10
Canary, S. C., et al, Tulsa, Okla.	734.20	962.57
Carter, Fine & Carter, Wichita Falls	2,867.81	3,654.95
Consolidated Oil Co. of Texas, Wichita Falls	33,637.05	43,943.75
Central Holding Co., Wichita Falls	768.85	1,042.82
Chapman, P. A., Jr., Eastland	716.17	904.22
C. W. M. T. Oil Co., Wichita Falls	2,666.21	3,727.67
Coffey & Graham, Wichita Falls	424.76	577.68
Clarkson, William, Jr. (for Oil City Iron Works), Corsicana	1,063.60	1,254.51
Cranfill Brothers Oil Co., Dallas	6,598.35	9,084.39
Center Dome Oil Co., The, Panhandle	10.00	575.00
Canyon Oil Co., Seminole	45,533.27	35,638.95
Cawling & Hoppes, Burkburnett	198.86	267.80
Cawling & Newell Oil Co., Burkburnett	387.92	514.11
Cranfill Brothers Oil Co., Wichita Falls	1,362.44	1,808.48
Carlin & Tobin, Ranger	293.42	426.40
Carlin, W. W., Ranger	328.34	462.92
Crosscut Corp., The, Fort Worth	2,798.56	3,418.63
Christie Brothers, Wichita Falls	8,958.13	11,808.93
Chenault, Palmer & Burch, Wichita Falls	20,661.60	28,235.18
Clem Oil Co., Houston	524.86	524.86
Coffield & Hale, Rockdale	5,663.72	7,136.72
Cluck & Bush, Waco	2.83	367.90
Cook, R. H., Electra	513.76	693.64
Conner, Son & Cloughley, Gotebo, Okla.	5,966.25	6,810.99
Cranfill & Reynolds, Cisco	74,108.28	95,004.67
Cushing Refining & Gasoline Co., Cushing, Okla.	9,499.54	5,699.72
W. L. Chenault, Amarillo	1,222.81	1,687.47
Corsicana Oil & Refining Co., Corsicana	9,396.58	9,364.56
Crowe, W. H. and Elmer, Iowa Park	47.68	64.84
Chicago Oil & Land Co., Rockdale	3,520.81	4,506.64
Cady Oil Co. of Texas, The, Moran	2,562.32	3,331.02
Chapman, P. A., estate, Waxahachie	20,552.67	26,517.69
Champlin Refining Co., Enid, Okla.	42,290.26	30,084.80
Crosby, T. A., Wichita Falls	.....	.....
Coble-Whittenberg Oil Co., Amarillo	15,395.14	13,742.58
D		
Daniel, S. B., Wichita Falls (6-30-27)	1,488.48	2,068.52
Dean Oil Co., Burkburnett (6-30-27)	173.05	204.20
Duke-Langford Oil Co., Wichita Falls (6-30-27)	627.53	627.53
Dickey Oil Co., Cisco (6-30-27)	35.10	38.08
Duho Oil Co., Houston (3-31-27)	1,414.18	1,802.21
Duho Oil Co., Houston (6-30-27)	1,178.70	1,188.35
Duffield & Howard Oil Co., Tulsa, Okla.	1,480.40	1,803.47
Deep Sands Syndicate, The, Corsicana	3.52	352.00
Duho Oil Co., Houston	223.12	267.74
Derby Oil Co., The, Dallas	1,146.28	1,421.11
Dayton Oil Co., Dayton—Wells not operated during this quarter.		
Durston, H. H., Fort Worth	939.54	1,071.07
Dominion Oil Co., Tulsa, Okla.	1,867.22	2,444.79
Davis, W. F., Wichita Falls	897.99	1,212.29
Dennis, J. S., Moran	2,073.50	2,793.45
Dunigan Brothers, Amarillo	7,022.74	6,206.39
Duncan & Stratton, Cross Plains	485.44	601.35
Dull-Earls Texas Co., Albany	754.14	968.61
Duke-Langford Oil Co., Wichita Falls	857.63	857.63
Dean Oil Co., Burkburnett	122.55	144.61
Developers Oil & Gas Co., Wichita Falls	10.65	1,426.00
Dismukes, H. R., receiver, Liberty	9,689.76	11,627.71
Douglas Production Co., Electra	2,553.55	3,497.86
Diana Oil Co., Tulsa, Okla.	4,500.94	6,042.80
Douglas Brothers Oil Co., Electra	673.96	916.57
Dale Oil Corp., Wichita Falls	27,189.81	36,848.67
Duquesne Oil Corp., Eastland	624.40	940.56
Davis, L. R., Tulsa, Okla.	201.13	215.39
Dixon, Reeder & Cook, Wichita Falls	1,402.89	1,886.46
Dixon, Reeder & Cook, Wichita Falls	228.63	254.51
Devonian Oil Co., Tulsa, Okla.	48,339.69	42,071.38
Dixie Drilling Co., Fort Worth	747.72	1,020.66
Dale-Knotts Oil Co., Wichita Falls	363.65	496.64
Dixie Oil Co., Inc., Shreveport, La.	255,360.28	179,111.80
Dorian, R. P., Wichita Falls	8,645.49	8,645.49
Dalton, Jack, Oil Co., Fort Worth	2,599.26	3,440.75
Dixon Creek Oil Co., Inc., Amarillo	440,728.68	385,397.28
Den-Wich Oil Co., Abilene	1,719.02	2,130.80
Dillon-Glasscock Oil Co., San Antonio	515.10	598.49
Derby, A. L., and E. A. Haines, Wichita, Kans.	15,942.94	13,823.71
Derby, Haines & Williams, Wichita, Kans.	76,623.67	62,801.09
Deering, John A., Houston	10,037.43	12,012.64
Dudley, G. S., Iowa Park	976.46	1,360.18
Davis, Caroline A., Somerset	47.05	555.19
Delmar Oil Co., Bartlesville, Okla.	2,872.27	2,530.53
Dunaway, J. E., et al, Wichita Falls	1,830.08	2,465.46
Daniel, S. B., Wichita Falls	1,225.62	1,666.91
Douglas Oil Co., Tulsa, Okla.	3,640.08	3,177.89
Double Five Oil Co., Amarillo	2,905.69	2,508.09
Dale & Crawford, Electra	823.10	1,119.40
Dale Oil & Refining Co., The, Wichita Falls	1,687.46	2,261.19
Dibble Oil Co., San Antonio	1,892.93	1,892.93
Delaney & Associates Oil Co., Inc., Eslick & Rieger, Pampa	232.68	260.60
E		
Emrick, U. R., Chicago, Ill.	471.07	600.91
East Batson Oil Co., Batson	16,696.80	20,036.16
Electra Gulf Oil Co., Electra	4,151.03	5,083.78

A NEW

FLUOR

Model "HB"

Cooling Tower

No Field Erection.
Shipped completely assembled.
Capacity 15-25 gal. per min.
Jacket Water.
Dimensions: 5 ft. 8 in. square by 9 ft. high.
Weight: 1,000 lbs.
Shipment from stock.

The new Fluor Model HB Tower has been designed particularly for oil field service to cool jacket water from oil and gas engines of 40-60 H.P. The basin is elevated to give gravity flow to engine jackets.

Our nearest district office will be glad to send an engineer on request to explain the economies of these new Towers.

Jackson Engineering & Equipment Company

909 East 59th St., Los Angeles, Calif.

502 National Bank of Commerce Bldg., Tulsa, Okla.

FLUOR REDWOOD COOLING TOWERS

ECLIPSE DEEPWELL PULLING MACHINE

Dependability—

the leading Oil Producing Companies of the World are depending on the—

Eclipse Deepwell Pulling Machine

they are using the Eclipse for only one reason, it has proven its dependability.

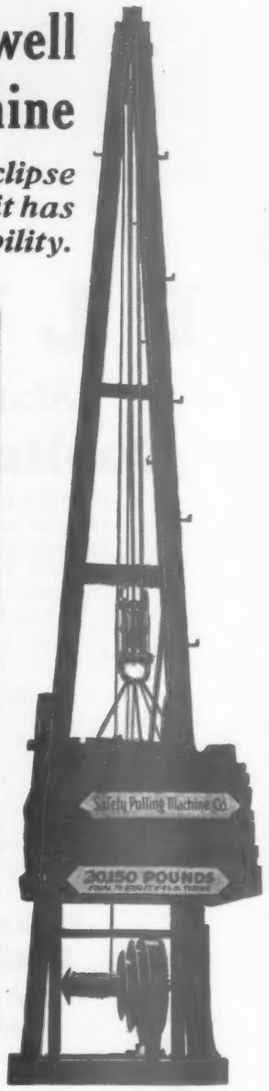
Specifications
DEEPWELL

Eclipse Deepwell up to 8000 ft. 2" Tubing, Weight 3645

Mast 8x10x36 ft., Douglass Fir A-Style Two Wheel Truck, two 16" Bronze bearing crown pulleys, 2½ Steel Pin mounted in malleable boxings. Large supporting plate 16" dia. between crown pulleys, eliminating any chance of bending pin.

Reel or Drum; 32 lb. 8¼ casing filled with concrete for winding drum, differentials banded with 3/16 band iron, brake surface 6"x40", choke brake style same as Star drilling machine.

The whole reel assembly is mounted on 2¾ square steel shaft extending clear through reel, secured by three heavy castings.



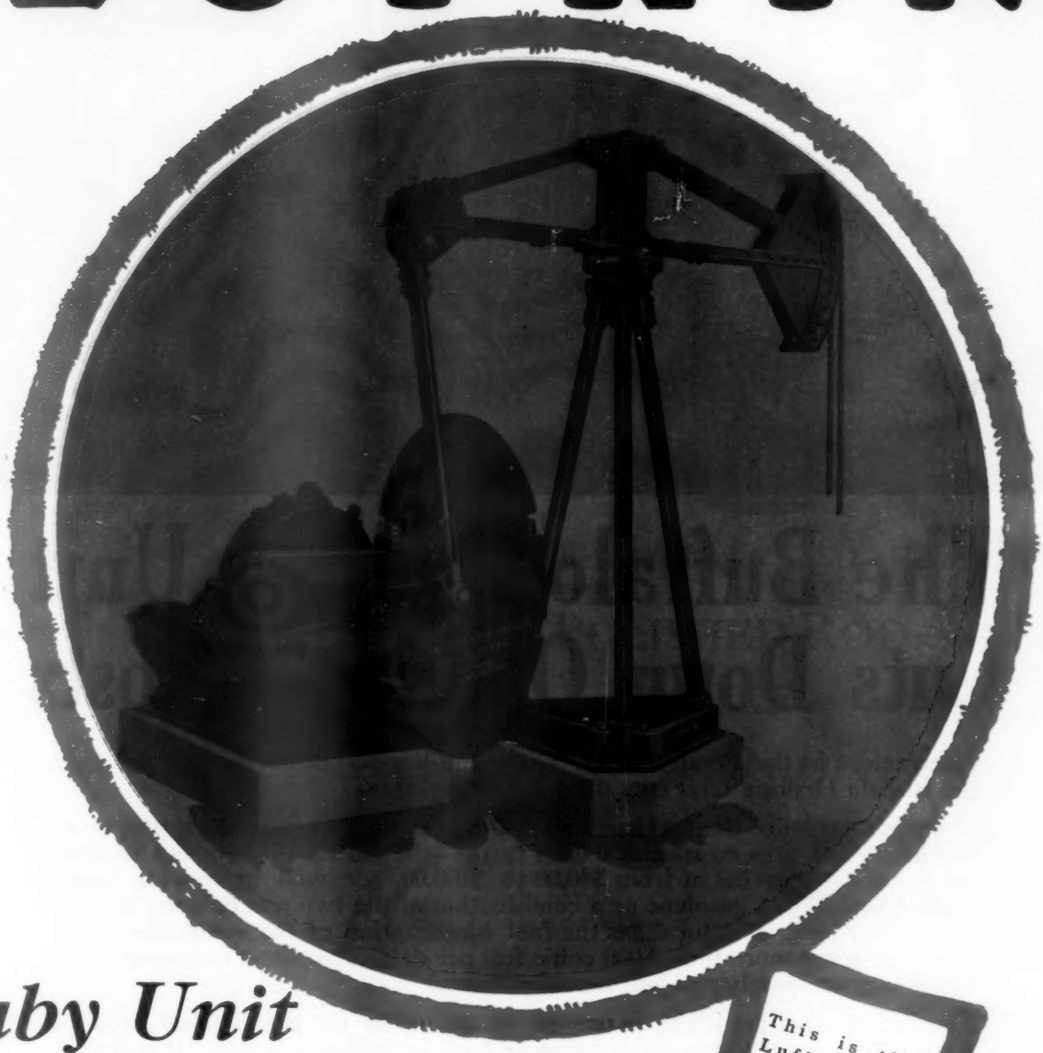
For Sale By All Supply Companies

Manufactured By—

SAFETY PULLING MACHINE CO.
INDEPENDENCE, KANSAS

Name and Address—	Barrels	Value
Electra Production Co., Electra	1,117.46	1,496.51
Ellis & Lancaster, Beaumont	722.35	927.22
Empire, Pierce-Fordyce, Fort Worth	13,238.77	18,094.26
Ellis & Anderson, San Antonio	168.66	202.39
Ellison Oil Co., Rockdale	152.90	197.20
Empire Gas & Fuel Co., Bartlesville, Okla.	315,468.47	363,924.43
Eureka Producing Co., Tulsa, Okla.	22,087.73	29,697.28
Ernest Oil Co., Rockdale	970.32	1,222.36
Erickson, David, Wichita Falls	63.02	83.38
Emrick, U. R., Chicago, Ill.	410.72	518.11
Eastland Oil Co., The, Fort Worth	1,120,599.71	755,302.76
Eddy Oil Co., Beaumont	210.31	252.37
Echo Oil Co., Amarillo	53,417.97	48,806.86
Eason, T. T., Enid, Okla.	1,714.74	1,206.66
E. S. Easton, Wichita Falls	2,040.86	2,735.84
Electra Callahan Oil Co., Electra	824.64	1,111.56
E. A. Engel, Albany	1,297.71	1,657.87
Evangeline Petroleum Co., Wichita Falls	2,461.84	2,461.84
Empire Holding Corp., Wichita Falls	2,199.29	2,781.19
Erie Investments, Ltd., of Texas, Toronto, Canada	699.15	794.91
Eggers, J. E., trustee, San Antonio	907.87	1,078.24
F		
Freeman-Hampton Oil Corp., Wichita Falls (6-30-27)	10,628.30	14,241.92
Foster & Sandford, Fort Worth	519.52	602.64
Freeman-Hampton Oil Corp., Wichita Falls	1,307.80	1,775.26
Freeman-Hampton Oil Corp., Wichita Falls	7,881.20	10,523.82
Ferguson, W. R., Wichita Falls	667.77	906.4
Fuqua & Hipp, Grandfield, Okla.	1,649.99	2,081.42
Farish & Ireland lease, Houston	4,736.17	5,683.40
Farlyn Oil Co., Houston	30,247.21	33,876.87
Foster-Townsend & Ungren & Frazier, Putnam	1,617.20	2,199.40
Fort Ring Oil & Gas Co., Fort Worth	258.45	379.75
Ferguson, Hawkins & Hester, Wichita Falls	1,686.91	2,317.17
Flynn, W. B., Beaumont	4,147.73	5,056.75
Four Oil Co., The, Wichita Falls	3,125.68	4,125.90
Fensland Oil Co. of Texas, Denver, Colo.	5,787.42	7,490.76
Fountain Production Co., Saratoga	2,660.90	3,193.08
Fogle Oil Co., Kinzno, Pa.	186.87	2,331.23
Franchot & Co., D. W., Tulsa, Okla.	63.30	79.76
Falls Production Co., Wichita Falls	12,194.62	16,271.42
Frontier Oil Co., San Antonio	15,601.96	18,754.36
Fisher, J. A., Wichita Falls	2,737.00	3,542.44
Fain-McGaha Oil Corp. of Wichita Falls, Tex., Wichita Falls	165,262.47	208,759.63
Ferguson & Watson, Electra	1,757.16	2,389.73
F. H. E. Oil Co., Sherman	16,490.35	19,028.45
Fleming and Kimbell, Sherman	10,114.69	10,314.53
G		
Garnett, T. A., trustee, Wichita Falls (6-30-27)	2,445.56	3,231.73
Garnett, T. A., trustee, Wichita Falls	1,684.48	2,106.31
Garnett, T. A., trustee, Wichita Falls	1,493.12	1,985.95
Golding-Phillips Oil Corp., Amarillo (6-30-27)	3,516.33	3,340.51
Green, W. J., et al, Amarillo	99.40	129.22
Gilbert Co., The, Beaumont	6,313.58	7,576.30
Gaither Production Co., Rockdale	2,322.94	2,996.59
Guthrie, Cole & Ferguson, Wichita Falls	1,167.51	1,517.76
Gordon Oil Co. of Texas, Logan, Ohio	77.08	90.18
Glenridge Oil Corp., St. Louis, Mo.	4,661.89	5,469.31
Godley Oil & Gas Co., Dallas	11,775.17	15,341.96
Ginter Lange Oil Co., San Antonio	20.36	2,551.40
Ginter, George E., San Antonio	237.72	303.26
Gunn Production Co., The, Gross Plains	3,481.42	4,230.42
Graham & Lash, Moran	410.48	550.03
Gilman and Conway Brothers, Ranger	10,360.13	14,620.96
Gardner Brothers & Collins, Wichita Falls	857.05	1,145.54
Gates Oil Co., Ardmore, Okla.	4,266.09	6,282.67
Grayce Oil Co., Wichita Falls	26,086.16	36,156.40
Gulf Coast Oil Corp., Dallas	23,243.15	27,891.79
Gultez Production Co., Waxahachie	4,098.92	5,656.51
Gordon, H. B., Jr., Houston	2,186.01	3,030.21
Grady, D., Electra	475.52	796.16
Grand Duke Prod. Co., Muskogee, Okla.	190.31	195.83
Gallagher & Lawson, Desdemona	381.32	469.04
Gohlke, F. H., Wichita Falls (6-30-27)	2.56	31.24
Gohlke, F. H., Wichita Falls	4.24	51.73
Gray, T. H., Fort Worth	974.19	1,124.50
Glass Brothers, Rosebud	933.55	1,179.36
Glodis Oil Co., Saratoga	2,906.69	2,906.69
Gilliam Logan Oil Co., Fort Worth	2,930.30	3,322.66
Gholson, Moorman & Dorsey, et al, Ranger	2,279.62	3,105.87
Gilman & Mendenhall, Cisco	498.46	662.84
Gwynn-Boyd Drilling Co., Wichita Falls	16,637.22	14,820.19
Gwynn, P. F., Wichita Falls	299.91	364.70
Gwynn, P. F., agent, Wichita Falls	2,013.39	2,697.93
Gutzler & Cottingham, Indianapolis, Ind.	12.06	15.68
Goldelline Oil Corp., Oklahoma City, Okla.	19,506.74	17,001.64
Glasscock, Rosa Valerio, San Antonio	676.81	809.28
Goosebee & Goosebee, Wichita Falls (3-31-27)	336.86	441.40
Gibson Oil Corp., Amarillo	107,227.95	114,036.69
Godfrey, F. L., Enid, Okla.	110.70	146.36
Gopher Oil Co., The, Amarillo	1,990.94	1,739.37
Glasscock Leasing Snydicate, San Antonio	2,051.70	2,497.93
Golding & Cochran, Wichita Falls	8,752.46	11,203.15
Galcanda Oil Co., Wichita Falls	210.58	236.85
Goldhill Oil Co., Iowa Park	170.29	2,247.32
General Oil Co., The, Houston	84.18	107.75
Gholson, Thompson, Barkley, Heratty, Ranger	4,149.36	5,489.44
Gutzler, W. F., Wichita Falls	416.72	540.69
Gladys Belle Oil Co., Tulsa, Okla.	6,944.85	8,484.82
Gholson, John M., et al, Ranger	16,957.99	22,461.96
Group No. 1 Oil Corp., Big Lake	564,370.60	627,438.11
Galvez Oil Corp., Tulsa, Okla.	4,925.52	6,480.20
Garrett, W. T., Eastland	799.31	1,054.23
Gates, Bacon-Lea, Wichita Falls	19,725.90	26,393.55
Goolsbee & Graham, Wichita Falls	1.50	193.37
Gulf Production Co., Houston	5,593,842.97	5,581,868.34
Gilliland Oil Co., Tulsa, Okla.	932.62	1,288.28
Granite Oil & Gas Co., Ridgway, Colo.	259.26	355.72
Gates Oil Co., Denver, Colo.	13,609.86	10,552.37
Graham, H. L., Wichita Falls	1,377.66	1,764.27
Grayburg Oil Co., San Antonio	212,075.40	216,109.80
Golden West Oil Co., San Antonio	21,737.12	23,563.88
Guaranty Oil Co., Electra	315.20	391.15
Goldenrod Oil Co., Dallas	1,286.46	1,439.40
Gilliland, C. W., Wichita Falls	2,633.13	3,660.81
H		
Hueco-Ranger Oil Co., El Paso (6-30-27)	360.87	476.99
Harris & Bryan, Eastland (6-30-27)	2.69	381.98
Harris & Bryan, Eastland (9-30-27)	1.90	269.80
Hardy Oil Co., Wichita Falls	3,270.97	4,383.10
Hamilton, George B., Olney	4.81	634.92
Howard Petroleum Corp., Tulsa, Okla.	997.92	1,224.36
Hickey, T. J., Corsicana	62.56	72.25
Hedrick-Camp Drilling Co., Wichita Falls	15,372.15	18,036.08
Houghland Production Co., Ponca City, Okla.	5,824.39	7,463.32
Holmes & Huey, Amarillo	11,860.58	10,606.58
Hyde & James, Albany	13,367.62	17,906.19
Harris-Hays Co., Okmulgee, Okla. (from 7-1-26 to 8-15-27)	897.78	1,550.24
Harris-Hays Co., Okmulgee, Okla.	594.53	738.77
Halmack Oil Co., Dallas	2,728.42	3,601.06
Hobson & Voorhees, San Antonio	810.95	1,216.42
Hamon, Jake L., Jr., Ardmore, Okla.	12,064.01	15,836.78
Humble Oil & Refining Co., Houston	2,815,955.31	3,163,500.13
Hanlon Gasoline Co., Tulsa, Okla.	1,471.06	1,865.36
Hype Prod. Co., Houston	5,404.52	6,485.42
Hefley, McIntosh & Thomas, Cameron	735.40	919.24
Hobbs Oil Co., Tulsa, Okla.	3,068.04	4,109.33
Hitchman & Howard, San Antonio	1,618.50	1,997.93
Holmes & Riley, Amarillo	11,699.37	9,966.85
Hill & Riley, Amarillo	2,852.63	2,449.81
Hub Oil Co., Dallas	32.10	438.03
Horn, John E. and E. S., Kansas City, Mo.	5,104.45	4,673.00
Houston Gulf Gas Co., Houston	17,378.46	18,133.10
Houston Oil Co. of Texas, Houston	9,336.62	11,078.67
Howard, Duffield & Berlin, Tulsa, Okla.	1,476.48	1,816.05
Hankamer & Co., Earl C., Sour Lake	658.05	789.66
Hamilton, Robert, et al, Eastland	4.00	468.00
Hambleton, George, San Antonio	578.50	705.73
Hammond, J. G., Wichita Falls	311.83	422.52

LUFKIN



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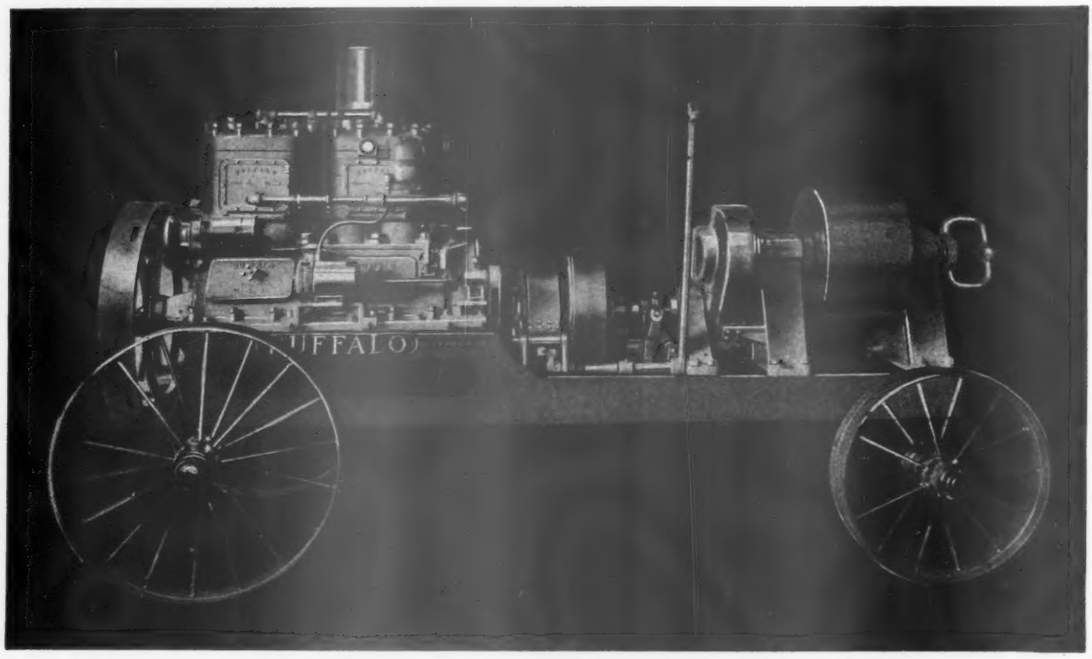

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It does not require the services of a licensed engineer. It can be rigged up in one hour—requires no special setting forms—the old rig timbers can be used which means a saving of from $40.00 to $100.00 per well in moving costs. Either natural gas, gasolene or a combination of the two can be used as fuel. When operating on natural gas the fuel consumption of the outfit shown on this page is not more than 4,000 cubic feet per day. The water consumption is small, approximately one-half barrel per day.

The Buffalo Drilling Unit has proved its ability to do the hardest kind of work. It is equal to steam in dropping tools or pulling a bailer. It will drill and spud just as fast as any outfit operated by any other power.

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Parkersburg, W. Va.

The Prichard Supply Co.,
Mannington, W. Va.
Waynesburg, Penna.

R. H. Shields,
Western Distributor
El Dorado, Kansas
Midland, Texas
McCamey, Texas
Abilene, Texas

Louden Tool Co.,
Kittanning, Pa.

Name and Address—	Barrels	Value
Hope Oil & Gas Co., Fort Worth	24,644.94	31,843.70
Huber Co. of Louisiana, Inc., Breckenridge	679.47	812.53
Hughes, William K., St. Louis, Mo.	1,231.47	1,59747
Home Oil & Gas Co., The, Albany, Tex.	2,948.71	3,776.72
Harvey, R. A., Houston	2,631.00	3,047.00
Hardie, J. M. & Co., Sour Lake	547.85	657.42
Hart Oil Corp., Fort Worth	387.70	511.75
Hart-Mexia Syndicate, Fort Worth	479.90	627.56
Herbert Oil Co. of Texas, Fort Worth	997.83	1,373.51
H. A. S. Oil Co., Wichita Falls	194.20	248.58
Hull Oil Co., Beaumont	18,250.12	21,676.07
Hockaday & Shaw, Wichita Falls	1,570.88	2,096.73
Hinson, G. D., and R. V. Tidwell, Graham	5,025.04	6,665.20
Holman Brothers and J. A. Tidwell, Graham	9,747.81	13,594.21
H-Y Oil Co., Fort Worth	3,202.25	4,275.95
Hamockla Oil Co., Oklahoma City, Okla.	4,403.85	6,209.55
Hughes Oil Co., J. K., Mexia	37,834.55	52,172.21
Hester, Hawkins & Ferguson, trustee, Wichita Falls	1,525.78	2,267.20
Hughes, J. K., Development Co., Mexia	276,588.86	316,047.22
Hoffer Oil Corp., Fort Worth	6,192.61	8,416.88
Harry Hines, Wichita Falls	556.79	728.73
Horn, T. W., Houston	1,220.13	1,464.15
Hooser Oil & Development Co., Dallas	1,924.58	2,607.90
Humphreys Brothers, Inc., Brownwood	548.83	753.19
Humphreys Corp., Houston	100,743.85	124,772.85
Hyde, George, Houston	5,092.57	6,111.08
Helvet'a Oil Co., San Antonio	16,148.86	18,995.60
Hill, W. R., trustee, Burkburnett	326.96	451.20
Hamilton, Walter R., San Antonio	6,144.68	7,998.72
Herogan Oil Co., Amarillo	8,342.65	7,542.83
Houston Gulf Gas Co., Houston	15,534.48	16,053.59
Hickok Prod. & Dev. Co., Toledo, Ohio	312.16	344.88
Hoppes, W. T., Burkburnett	164.72	206.81
Houston Prod. Co., Houston	18,814.50	22,965.05
Hemby, J. M., Electra	914.76	1,223.68
Hueco-Ranger Oil Co., El Paso	748.52	1,002.61
Hooser, John W., E. H. Eddleman and J. C. Mytinger, receivers for R. M. Waggoner, Wichita Falls	1,346.63	1,810.10
Harris-Fisher Oil Co., Cisco	822.70	1,036.98
Hammon, Heyser & Garrett, Wichita Falls	1,679.72	2,289.95
H. L. J. Oil & Gas Trust, Balt'more, Md.	2,070.38	2,945.55
Harris & Simons, Tulsa, Okla.	9,548.95	10,694.73
Holbrook & Woods, Wichita Falls	11,622.19	15,618.39
Hammon, Heyser, Garrett & King, Wichita Falls	3,497.28	4,877 24
Hammon & Heyser, Wichita Falls	346.62	471.40
Hammon, Wayne H., Wichita Falls	1,481.62	1,926.09
Hammon & Garrett, Wichita Falls	5,164.84	7,127.41
Hammon, Heyser & Garrett, special account, Wichita Falls	15,704.81	19,234.19
Howell, M. L., Lohn, Tex.	9.96	1,294.80
Holloway, R. R., Brownwood	247.80	332.05
Harrison Oil Co., Houston	18,256.47	26,125 07
Hammond, L. P., Wichita Falls	3,191.44	4,299.99
Hickory Oil & Gas Co., Fort Worth	245.13	278.75
Hooser, J. W., et al, receivers for N. B. Chenault, Wichita Falls	1,177.46	1,580.23
Hooser, J. W., et al, receivers for M. J. Basham, Wichita Falls	5,126.17	5,853.37
Hamilton & Martin, Wichita Falls	1,381.80	1,823.98
Harrell, O. H. and C. E., Abilene	669.10	865.21
Harrell Brothers, Abilene	925.08	1,258.85
Hickory Oil & Gas Corp., Fort Worth	245.13	278.75
I		
Infield Petroleum Co., Austin	1,265.47	1,695.73
Ilseng Prod. Co., Fort Worth	2,298.35	2,965.81
Ilseng, A. G., Fort Worth	249.17	345.90
Idaho Oil Co., San Antonio	1,207.82	1,467.53
Interocean Oil Co., Tulsa, Okla.	16,822.21	22,188.09
Independent Oil & Gas Co., Tulsa, Okla.	223,508.97	174,141.80
Irick Oil Co. of Ohio, Waskom, Tex.	181.06	231.76
J		
Jacobs, I., Dallas (6-30-27)	101.56	108.07
James, J. H., Fort Worth (6-30-27)	210.62	284.49
Jones, J. A., Moran	582.74	800.05
Jennings, J. C., Wichita Falls	867.32	1,210.95
Johnson Brothers, San Antonio	10,503.20	12,759.55
Judson Oil Co., Tulsa, Okla.	11,870.37	16,152.83
Jackson, T. H., Sipe Springs	214.20	272.48
Japhet Production Co., Houston	26,392.16	22,883.00
Jones, W. A., Thomas Phillips lease, Minerva	226.01	291.56
Jackson, J. S., trustee, Sour Lake	2,644.92	3,173.90
Jones Oil Co., Wichita Falls	2,060.82	2,765.17
Jackson Co., The, San Antonio	1,428.22	1,726.90
Junior Oil Co., Cross Plains	2,206.19	3,171.39
Jones, Edwin, El Dorado, Ark.	23,977.84	28,471.18
Jackson, O. C., San Antonio	.....	.....
Janellen Oil Co., Tulsa, Okla.	136.67	158.26
Julia Oil Co., Sour Lake	4,189.36	5,027.23
Jones, J. E., Wichita Falls	1,190.54	1,612.72
Jameson, Charles M., Moran, Tex.	1,231.66	1,683.38
Jonray Oil Co., San Antonio	4,038.66	4,810.90
Jacob Oil & Gas Co., Graham, Tex.	330.88	446.09
K		
Kurz, A. H., San Antonio (6-30-27)	339.74	417.69
Kent-Middleton Refining Co., Corsicana	23,914.39	30,620.84
Kavanaugh Petroleum Co., Houston	1,354.50	1,762.75
Kolp, C. F., Electra	11,520.46	15,208.14
Kerr, T. P., Corsicana	502.78	599.24
K. Kishi (Thrift McGuire lease), Terry	580.55	696.66
Kate Bell Oil Co., The, Dallas	1,429.77	1,942.43
Kaufman, L., San Anton'o	471.97	553.87
Kewanee Oil & Gas Co., The, Pittsburgh, Pa.	177,302.34	232,847.84
Kirby Petroleum Co., Houston	7,189.50	7,578.20
Kilgore, M. H., Beaumont	736.59	883.91
Kent, G. C., Corsicana	37,038.96	47,580.25
Kimmell & Dillard, Wichita Falls	4,573.36	6,044.46
Kurz Oil Co., Somerset	595.28	686.48
Kleinfelder, B. F., Breckenridge	742.64	965.38
Kemp Munger Allen Oil Co., Wichita Falls	7,312.68	9,872.12
Keystone Production Co. of Texas, Fort Worth	4,433.09	6,006.65
Keener Oil & Gas Co. of Texas, Tulsa, Okla.	6,365.63	8,375.56
Kemrow Co., Wooster, Ohio	19,140.79	26,037.38
Kuhlmeier-Kleiner Oil Co., Cisco, Tex.	848.28	1,136.70
Kleunke, George, trustee, Von Ormy, Tex.	2,505.12	2,909.45
King Royalty Co., Wichita Falls	27,376.32	37,482.99
Kahle, Gracey & Diver, Bridgeport	11,302.33	12,658.60
Kynerd, W. D., Dallas	1,501.70	1,917.00
Killam, O. W., et al, Laredo	668.85	900.20
Killam, O. W., Laredo	1,480.47	1,480.47
Kone Production Co., San Antonio	8,290.23	11,502.25
Keen & Woolf Oil Co., Shreveport, La.	23,961.41	28,750.20
King & Daniel, Wichita Falls	4,646.81	6,395.64
K. & S. Corp., The, Laredo	20,949.26	20,949.26
Kershaw, L. R., Muskogee, Okla.	2,662.49	1,856.43
King, Anna B., Muskogee, Okla.	2,662.49	1,856.43
Kistler, Frank E., & Co., Denver, Colo.	96,011.17	84,764.84
Kendrick, P. S., Albany, Tex.	1,196.01	1,467.81
Kemp-Randel-Wilson, Electra	90.21	112.76
Kleiner, Charles J., Cisco	872.92	1,187.16
L		
Lockhart & Co., Los Angeles, Calif. (3-31-27)	10,655.52	16.057.11
Lockhart & Co., Los Angeles, Calif. (6-30-27)	12,273.99	12,522.07
Light Oil Co., Beaumont (6-30-27)	.44	76.90
Loggie & Arendt, Albany, Tex.	15.84	1,874.52
Lackey, W. G., Tulsa, Okla.	4,559.49	6,071.93
Lawson, E. B., Nowata, Okla.	45,106.48	60,096.49
Letwin, Sam, Breckenridge	1,984.44	2,559.91
Larkin, W. B., Burnett et al lease, Wichita Falls	391.72	521.74
Leonard M. Levy, trustee No. 1, Ranger	4,204.31	6,255.59
Linedo Oil Co., Lincoln, Neb.	2,326.76	2,326.76
Lowery, J. T., Albany, Tex.	97.95	109.11
Lomax, Thornton, Jr., Wichita Falls	7,362.41	10,143.58
Lewis & House, Henry lease, Cameron	791.80	989.74
Lewis & House, Henry lease, Cameron (6-30-27)	894.55	1,140.79
Lytle Oil Association, Lytle	320.40	367.17
Louisiana Oil Refining Corp., Shreveport, La.	29,408.25	36,647.45

THE "UNITED" POLISHED ROD CARRIER JOURNAL

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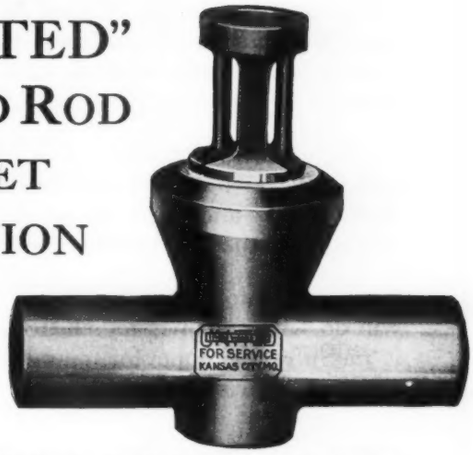

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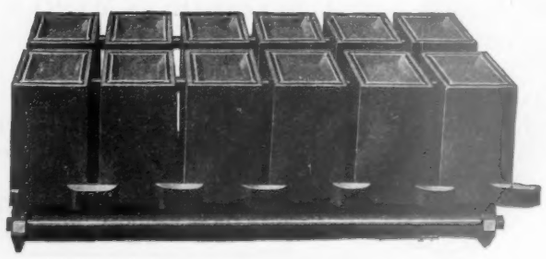
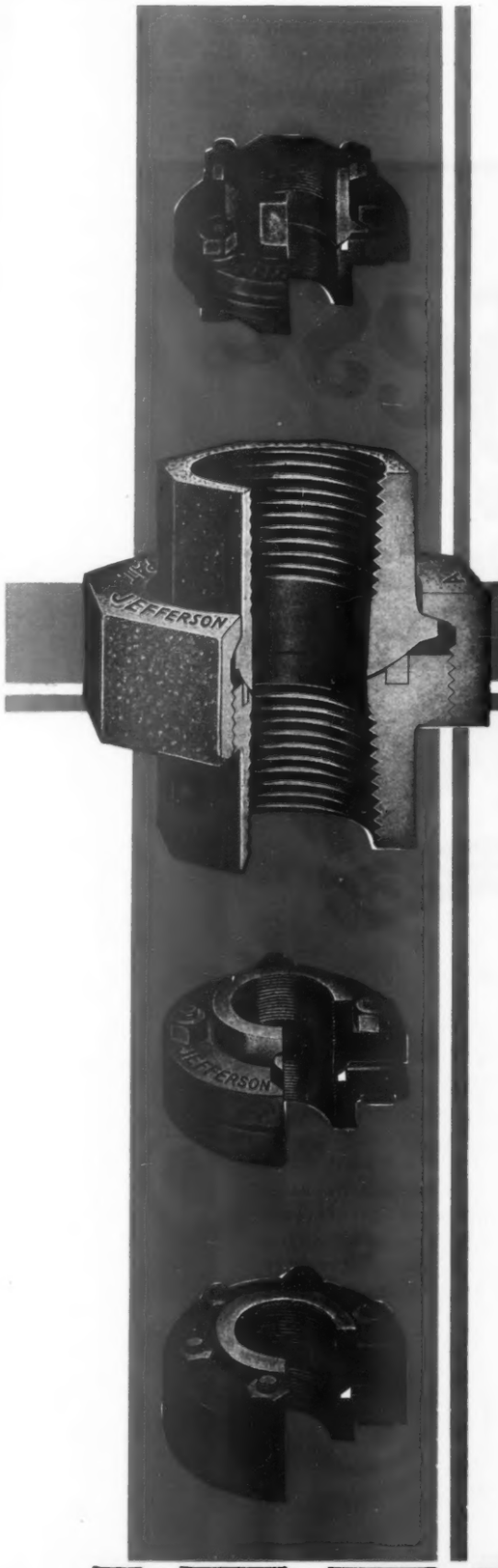


Name and Address—	Barrels	Value
Lowry Oil Corp., Wichita Falls	2,787.83	3,788.77
Little, William, Breckenridge	200.63	251.19
Little Caddo Syndicate, Fort Worth	1,577.80	2,096.93
Lee, R. Q., Cisco	210.71	282.35
Lucey Petroleum Co., Dallas	883.81	1,147.88
Lowenstein Oil Co., Rockdale	1,932.51	2,454.28
Lebow, C. H., Tulsa, Okla.	879.88	1,214.23
Lake-Graham Oil Co., Houston	3,618.62	4,937.71
Lewis, J. E., & Co., Eastland	1,572.64	2,170.53
Lewis, J. E., et al, Eastland	1,419.36	1,861.93
Leonard M. Levy, trustee No. 2, Fort Worth	2,381.87	3,503.73
Lesh, John L., & Co., Wichita Falls	17,574.72	18,304.25
Lone Star Gas Co., Dallas	10,412.93	14,192.11
Len-Cook Oil Co., Electra	989.80	1,329.31
Laclede Petroleum Co., Dallas	.42	59.40
Lesh & McCall, Nocona	43,344.33	48,545.66
Lamb, George E., Brownwood	524.51	681.53
Lytle, C. F., Mexia	26,647.99	33,697.67
Lake View Oil Co., Sour Lake	14,839.56	17,807.49
Langford, W. S., Wichita Falls	1,658.92	2,192.58
Laredo Oil Co., Laredo	2,869.52	2,869.52
Lynch-Stahl & Burress, Ardmore, Okla.	23,697.71	27,579.33
Lee, Homer, Wichita Falls	2,508.14	3,409.38
Landreth Prod. Corp., Fort Worth	994,161.36	694,870.84
Lowe, Delaney & Carter, DeLeon, Tex.	17,178.21	22,741.76
Lesh-Kilcrease & Co., Nocona	4,780.82	5,435.68
Leonard, George, Somerset	381.13	441.90
Leonard Oil Co., Somerset	355.65	426.75
Lain Oil Co., San Antonio	1,380.85	1,638.04
Liberty Oil & Gas Trust, Baltimore, Md.	1,716.40	2,193.38
Lake Erie Trust Co., trustee, Cleveland, Ohio	965.75	1,205.27
Lockhart & Co., Los Angeles, Calif.	20,617.00	16,826.05
M		
Mecom Oil Co., Liberty (6-30-27)	33,800.39	40,560.47
Mexican Oil Co., Laredo (6-30-27)	652.03	739.49
Moore, C. O., Oil Corp., St. Louis, Mo. (6-30-27)	13,880.59	22,191.22
McLester, Jerome, Baird (6-30-27)	1,085.16	1,389.40
Majestic Gasoline Co., Inc., Fort Worth	.....	.....
Moore & Henderson, Tulsa, Okla.	480.88	642.87
Mancill, R. W., trustee, Cisco	187.48	247.46
McDonald, M. C., Putnam	4,721.32	6,402.45
McCarter, R. C., Cisco	808.08	1,071.82
Minor Oil Co., Beaumont	8,386.44	10,063.72
Madden & Hunt, Olney	5,885.55	7,988.66
Mecom Oil Co., Liberty	31,150.36	37,380.43
Manhattan Oil Co., The, Kansas City, Mo.	13,768.28	14,977.81
Nancy McChesney, Olney	7,067.74	9,669.46
Mook-Texas Oil Co., Fort Worth	39,179.42	54,004.49
McJunkin, Florence, Ranger	858.88	1,279.73
Macknold Co., San Antonio	241.74	283.84
McDonald, W. W., et al, Dallas	14,797.34	19,592.76
McCarty Oil Co., Wichita Falls	162,544.82	224,032.89
Mitcham, G. P., Cisco	745.21	1,096.63
Martin Petroleum Co., Humble	34.53	4,143.00
Moran, W. J., Wichita Falls	2,159.28	2,986.07
Meridian Petroleum Corp., Tulsa, Okla.	4,131.67	5,539.61
Mennis, G. W., Wichita Falls	6,682.43	9,187.91
Mohegan Oil Co., Mohegan Lake, N. Y.	193.42	239.84
McCrary, E. W., Tulsa, Okla.	4,231.57	5,406.27
Midwest Exploration Co., Amarillo	282,214.76	259,971.36
McElreath & Suggett & Anderson & Gaus, Wichita Falls	2,095.68	2,644.00
Montgomery Rea-Montgomery, Sedwick, Tex.	2,532.60	3,343.03
Marland Oil Co. of Texas, Fort Worth	974,180.23	882,178.33
Minerva Petroleum Co., Minerva	1,389.83	1,789.85
Madison Oil & Gas Co., Electra	10,778.68	14,880.32
Marsalis Brothers, Humble, Tex.	2,301.15	2,740.90
McBride, W. C., Inc., St. Louis, Mo.	3,104.90	3,699.95
Marnet Oil & Gas Co., Tulsa, Okla.	4,637.15	5,522.98
Moore, F. L., trustee, Tulsa, Okla.	3,542.16	4,682.99
McEvan, J. P., Fort Worth	1,387.77	1,781.18
Mendenhall Oil Co., Cisco	2,357.62	3,233.03
Moss & Urschel, Mexia	5,584.53	7,092.35
Moss & Keeling, Rosson lease, Mexia	3,234.95	4,270.13
Moss, Urschel & Keys, Mexia	19,740.27	25,464.94
Moss & Keeling, Mexia	3,096.76	4,459.33
Moss, Keeling et al, Mexia	12,117.59	15,752.86
Magee & Stipe, Electra	935.04	1,267.64
Magee Brothers, Electra	705.60	973.76
McCormick & Noack, Rockdale	531.78	675.36
Mid-Kansas Oil & Gas Co., Findlay, Ohio	365,677.42	297,775.77
McNamara Oil Co., Beaumont	2,642.90	3,171.48
Moutray & Son, Abilene	33.28	424.87
Morton, A. D., Bartlesville, Okla.	1,593.75	1,692.73
McIlroy Oil Co., Inc., Amarillo	332,165.81	286,941.01
Magnolia Petroleum Co., Dallas	2,843,208.80	3,001,384.76
Margay Oil Corp., Tulsa, Okla.	3,635.16	4,654.40
McDaniel, E. R., Cisco	6,089.50	8,502.88
Moore, N. A., Eastland	1,515.48	1,958.45
Murchison Oil Co., Wichita Falls	47,111.74	43,739.03
Moody Corp., Houston	48,790.39	58,565.21
Mills & Gantly, Corsicana	1,919.16	1,919.16
McMurray, J. L., et al, Cisco	4,416.26	6,093.55
Murphey, J. A., Mineral Wells	410.26	516.25
Moran, J. J., Wichita Falls	2,219.28	3,017.97
Majestic Oil Co., The, Amarillo	33,809.17	34,684.24
Maben Oil Corp., Wichita Falls	588.30	770.48
Minnehoma Oil & Gas Co., Tulsa, Okla.	35,818.88	31,928.05
McMan Oil & Gas Co., Tulsa, Okla.	336,823.33	321,365.84
Merrick & Bristow, Ardmore, Okla.	10,361.02	8,298.99
Milham Corp. of Texas, San Antonio	124,461.09	158,580.02
McClure & Sons, W. D., Iowa Park	67.28	898.34
Maxwell, J. C., Fort Worth	182,732.59	137,922.16
Matador Oil & Gas Co., Quanah	269.50	323.38
Moutray Oil Co., Abilene	52,207.45	69,913.92
Mid-Texas Petroleum Co., Oklahoma City, Okla.	17,264.12	32,426.75
Mid-Continent Petroleum Corp., Tulsa, Okla.	16,957.51	22,468.99
Moore, C. O., Oil Co., St. Louis, Mo.	6,455.05	8,317.53
Midwest & Gulf Corp. Texas Trust estate, Tulsa, Okla.	1,263.36	1,516.03
McNallen & Griffin, Tulsa, Okla.	4,684.66	6,016.58
Monarch Royalty Corp., Kansas City, Mo.	281.43	21,160.48
Meredith, J. D., Moran	4,875.57	5,462.93
McCutchen, C. E., Wichita Falls	8,074.00	10,914.45
McLester Oil Co., Eastland	758.11	108,409.73
Mann & Forbes, Graham	2,158.58	2,935.66
Mann, F. A., Graham	1,194.00	1,647.12
Moore, C. O., Oil Corp., St. Louis, Mo.	1,193.65	1,484.02
M. & V. Oil Co., Wichita Falls	6,129.69	8,266.27
Minntex Oil Corp., Wichita Falls	844.15	959.18
Medina Oil & Gas Association, San Antonio	284.24	341.09
McCoy, J. H., Tulsa, Okla. (6-30-27)	407.75	599.64
McLester Oil Co., Breckenridge	4,325.00	5,532.98
Maer & Sanifforth, Wichita Falls	86,019.89	113,638.13
Mues & McDermott, Fort Worth	394.38	443.81
N		
National Supply Co. of Texas, Fort Worth	210.07	242.62
National Petroleum & Refining Co., Wichita Falls	1,204.09	1,645.36
New Oil Co. and Homer Slicker, Cisco, Tex.	975.95	1,215.40
Newport & Ohio Petroleum Co., Newport, N. J.	446.50	594.21
New Domain Oil & Gas Co., Pittsburgh, Pa.	8,429.04	7,300.54
Number Nine Oil Corp., Tulsa, Okla.	2,708.52	3,641.08
Navarro Oil Co., Houston	159,742.68	197,068.25
National Oil Co., San Antonio	1,001.00	1,161.16
Noble-Thomas Oil Co., Wichita Falls	1,455.88	1,819.85
Newton-Palmer Oil Co., Rockdale	1,064.44	1,339.77
Noack Oil Company, Rockdale	3,042.63	3,924.99
Noble Oil & Gas Co., Tulsa, Okla.	4,565.12	5,919.02
Norman Oil Co., Wichita Falls	1,841.17	2,509.44
Nunn & Macauley Oil Co., Amarillo	27,436.46	23,777.66
North Fort Oil Co., Amarillo	6,864.32	6,237.44
Necessity Oil Corp., Dallas	1,587.37	1,714.74
Nimrod Oil Co., Dallas	1,002.35	1,348.27
Nutt & Gates, Wichita Falls	1,778.31	2,454.07
O		
Osborne, R. R., Amarillo (6-30-27)	11,091.22	10,739.06
Ocean Oil & Refining Co., El Paso (6-30-27)	1,171.45	1,358.87



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Lexington, Mass., U. S. A.

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Vanadium Steel
Sprocket Chain

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EMSCO STEEL EQUIPPED WELLS ARE SAFE

Name and Address—	Barrels	Value
Oltex Oil Co., Fort Worth (6-30-27)	5,976.54	9,458.51
Owenwood Pool No. 3, J. W. Robbins, trustee, Fort Worth	63.07	8,137.11
Owenwood Oil Corp., Fort Worth	2,029.00	2,588.91
Oil Investment Co., Wichita Falls	4,255.23	5,657.50
Owerbey, J. D., Iowa Park	671.13	899.31
Old Ocean Oil Co., Kansas City, Mo.	4,152.80	4,617.61
Omilak Oil Co., Spokane, Wash.	3.09	370.80
Ohio-Somerset Oil Co., Cleveland, Ohio	1,804.86	1,895.10
Osborne, R. R., Amarillo	8,995.93	8,079.37
Omohundro, W. B., White Falls	3,872.83	5,527.46
O'Neil, John, Wichita Falls	15,240.77	21,667.61
O'Reilly, B. X., St. Louis, Mo.	12.58	2,262.93
O'Neil, H. A., Burkburnett	2,993.83	3,708.64
Oktaha Co., The, Tulsa, Okla.	862.73	1,159.00
Oriental Oil Co., Dallas	1,399.12	1,806.02
Oldon, William P., Iowa Park	15.11	2,176.22
Oltex Oil Co., Fort Worth	2,478.22	3,240.69
Owens Oil Co., Brownwood	1,300.45	1,508.03
Other companies for Texas Pacific Coal & Oil Co., Thurber, Tex.	95,030.33	125,351.36
Orange Petroleum Corp., Orange	37,940.91	46,502.93
Osage Development Co., Bartlesville, Okla.	1,907.37	1,907.37
Oil Operators Trust, Fort Worth	82,144.30	95,800.11
Osage Oil Corp., Tulsa, Okla.	119.30	113.34
Olean Petroleum Co., Bristow	40,659.80	42,924.32
Olney Oil & Refining Co., Olney	621.58	820.49
Old Colony Oil Co., Dayton, Tex.	2,979.05	3,574.86
Orth, T. R. T., Wichita Falls	418.16	496.57
Oklavania Oil Co., Tulsa, Okla.	5,614.31	7,245.62
Offenlocker, Emile, Tulsa, Okla.	279.28	363.63
P		
Plains Prod. Co., Wichita Falls (6-30-27)	11,177.36	15,758.84
Prairie Lea Prod. Co., San Antonio (6-30-27)	13,851.01	13,795.22
Primrose Oil Co., Sour Lake	1,185.67	1,422.80
Price, Russell & Co., Ranger	59.20	8,053.68
Plains Prod. Co., Wichita Falls	9,429.73	12,800.12
Putnam Oil Co., Tulsa, Okla.	61,433.72	81,503.08
Piper, L. E., trustee, Vernon	2,020.60	2,666.99
Powell, J. L., Wichita Falls	477.24	635.44
Pivoto, M. E., Sour Lake	2,604.81	3,125.77
Py-Tex Oil Co., Winchester, Ky.	11,573.09	16,055.20
Pomona Mutual Oil Syndicate, Pomona, Calif.	3,514.48	4,761.84
Progressive Prod. Co., Kansas City, Mo.	3,001.55	4,076.80
Petroleum Development Co., New York, N. Y.	43.76	570.99
Paraffine Oil Co., Houston	13,635.11	16,362.15
Prescott-Phoenix Oil & Gas Co., A. C. Trumbo, trustee, Muskogee, Okla.	190.31	195.83
Perry, Thos. H., Wichita Falls	2,219.28	3,017.97
Parry Oil Co. of Texas, Fort Worth	1,495.22	1,911.01
Palmer, Freddie Oil Co., Rockdale	200.26	255.68
Poor Boy Oil Co., Rockdale	884.12	1,167.04
Phillips Petroleum Co., Bartlesville, Okla.	2,660,000.28	2,553,464.67
Pace & Ward, Breckenridge	2,630.81	3,156.97
Producers Drilling Co., Wichita Falls	14,433.09	19,180.20
Petroleum Producers Co., Wichita Falls	146,393.99	197,486.58
Pace, Geo. L., Wichita Falls	1,821.35	2,442.89
Parsons, Ed V., Fort Worth	373.81	373.81
Phillips (Weatherly), Amarillo	732.90	658.14
Phillips, J. R., Currie Lease, Amarillo	37,042.56	31,435.03
Phillips, J. R., Heywood Lease, Amarillo	35,285.50	44,106.88
Paggi Bros. Oil Co., Beaumont	12,525.87	14,775.91
Paggi, Chas., & Co., Beaumont	2,218.58	2,662.28
Panhandle Refining Co., Wichita Falls	469,747.67	644,026.83
Patterson, W. A., Fort Worth	2,564.57	3,311.96
Perkins and Cullum, Wichita Falls	56,209.38	72,200.63
Pennok Oil Corp., Tulsa, Okla.	26,840.10	30,938.07
Pecos Oil Co., Crane	493,483.13	363,779.58
Poor Boy Oil Co., Laredo (3-31-27) and (6-30-27)	558.95	598.25
Poor Boy Oil Co., Laredo	327.38	327.38
Pemeta Oil Co., Fort Worth	5,030.50	6,400.60
Philp Bros., Beaumont	1,192.76	1,431.30
Payne, F. G., et al, Wichita Falls	2,745.14	3,788.29
P-M Drilling Co., W. E. Ross, W. L. Samuel, A. J. Fraley, Chelsea, Okla.	333.94	487.14
Phillips & Milam, Chelsea, Okla.	160.79	228.54
Powers Prod. Co., Houston	2,863.80	3,290.61
Pure Oil Co., Chicago, Ill.	956,059.90	1,257,893.36
Petroleum Investment Co., Fort Worth	5,025.32	6,803.05
Pioneer Oil, Gas & Refining Co., Danville, Ill.	1,498.80	1,614.72
Pols, Fine and Schulz, Wichita Falls	2,603.02	3,647.22
Pols, M., et al, Wichita Falls	7,218.07	9,816.58
Pols, M., trustee, Wichita Falls	370.51	496.49
Pols & Johnson, Wichita Falls	1,730.66	2,450.16
Pandem Oil Corp., Dallas	42,175.29	55,970.19
Peery-Moran & Woody, Wichita Falls	15,291.48	18,197.52
Prairie Oil & Gas Co., Independence, Kans.	164,724.34	158,765.55
Prairie Oil & Gas Co., Independence, Kans.	1,273,734.86	1,217,437.64
Producers Supply & Tool Co., Marietta, Ohio	431.43	560.86
Prescott-Phoenix Oil & Gas Co., Wichita Falls	1,832.99	2,382.32
Palo Duro Oil Co., Amarillo	44,667.41	39,509.08
Pitzer & West, Breckenridge	51,729.23	73,972.80
Phillips, J. R.-Invader Drilling Co., Amarillo	53,997.32	48,118.01
Priddy, Walter M., Wichita Falls	4,719.20	6,134.96
Pilkenton, F. L., Wichita Falls	1,107.43	1,447.06
Pantex Oil Co., Amarillo	69,998.89	59,464.79
Perkins, J. J., Wichita Falls	4,294.87	5,742.77
Paramount Oil Corp., Amarillo	66,527.81	57,602.59
Parks, J. T., Amarillo	15,510.43	13,130.29
Q		
Quinn, J. W., et al-formerly reported W. V. Lester et al, Eastland	56,528.38	80,719.89
Quartet Oil Co., Tulsa, Okla.	11,609.29	16,317.79
Quakins Petroleum Co., Ranger	6,196.72	8,427.53
Quincy Oil Co., Electra	156.34	192.71
R		
Red Hill Petroleum Corp., Los Angeles, Calif.	.....	.....
Ranell Oil Co., Oklahoma City, Okla.	5,054.77	6,692.00
Rayzor, J. P., Wichita Falls	273.18	329.85
Reinhart, M. J., trustee, Oklahoma City, Okla.	70.81	862.37
Rowe, M. D., Wichita Falls	1,365.88	1,807.49
Ross & Slicker Oil Co., Cisco	1,070.04	1,410.00
Rhader & Carey, Wichita Falls	6,276.54	7,971.20
Robinson, Arthur D., Dallas	5,831.47	8,629.55
Root & Rhodes, Eastland	4,520.00	6,318.00
Root, C. M., et al, Eastland	32,885.00	46,848.00
Rio Bravo Oil Co., Houston	773,953.46	953,410.05
Rex-Tex Oil Co., Winchester, Ky.	11,573.09	16,055.20
Robert Oil Corp., Breckenridge	8,624.31	11,335.53
Rountree, Ramsel & Kemp, Rockdale	902.05	1,187.65
Reclamation Co., The, Fort Worth	9,276.13	12,076.21
Roeser & Pendleton, Inc., Fort Worth	113,977.35	148,969.79
Ramsey, E. H., Rising Star	2,969.02	4,080.02
Ruby Oil Co., Minerva	316.59	408.72
Riner & Bailey, Wichita Falls	3,651.72	5,011.50
Rountree, White & Simpson, Rockdale	1,986.77	2,662.27
Rountree & Simpson, Rockdale	230.09	305.20
Rowan, A. H., Fort Worth	1,232.60	1,598.20
Rowe, J. G., Wichita Falls	1,414.27	1,839.94
Relief Oil Co., Amarillo	19,129.70	18,617.16
Roxana Petroleum Corp., St. Louis, Mo.	902,342.24	875,009.18
Rockwell, J. A., & Co., Warren, Pa.	3,081.71	3,932.58
Red Bank Oil Co., Tulsa, Okla.	40,457.28	54,101.08
Ruyle Farm & Oil Co., Wichita Falls	8,722.83	11,816.22
Rockdale Junior Oil Co., Rockdale	587.05	757.29
Russell-Sanderson Oil Co., Fort Worth	392.03	537.64
Ramming & Saunders, Wichita Falls	5,659.69	8,040.42
Ramming, R. W., Wichita Falls	10.22	13.70
Ramming, W. F., Wichita Falls	31.06	42.75
Ramming, Staley & Ramming, Wichita Falls	867.83	1,199.30
Ray-O-Oil Corp., Houston	733.23	879.88
Rycade Oil Corp., Houston	201,226.09	237,747.71
Ryan Consolidated Pet. Corp., Bartlesville, Okla.	67,252.12	77,103.32
Robinson, O. D., Pittsburgh, Pa.	1,678.43	1,678.43
Ross, C. E., Burkburnett	714.53	942.97
Root, Rhodes et al, Eastland	30,040.00	40,863.00
Ramsey & Decker, Breckenridge	3,831.66	4,992.93
Rex Petroleum Corp., Orange	35,108.19	39,729.82

Maybe "your best friend won't tell you" but your red ink will. For even tanks have halitosis (unpleasant breath.) And although tank breathing may not affect your olfactory nerves it sure does affect your profits. That's the insidious thing about it.

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The NEW SAMSON

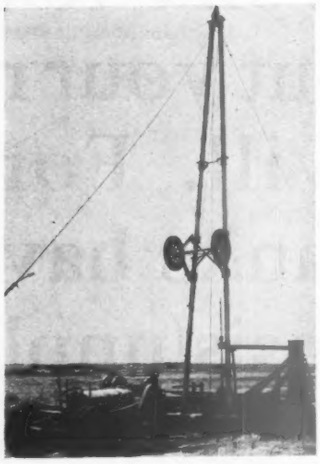

Illustration showing the SAMSON set up in position for pulling tubing using the SAMSON WINCH attached to a Fordson Tractor as the power unit.

All steel construction—no wood at all used in the entire construction, eliminating the natural tendency of wood to warp and twist out of shape. Steel mast made from 5 3/16"-20 lb. casing. All castings electric steel. Base of 8¼"-32 lb. casing. Sheaves 18" cast steel, all bearings Bunting bronze bushed, with Alemite connections.

No holes in pipe and it is not necessary to thread pipe to clamp together. Thus any part of mast may be replaced in field out of casing found on the lease.

Top and bottom sheave castings self aligning, can not throw line in bind.

Road wheels equipped with Hyatt Roller Bearings as standard, furnished with either steel wheels or pneumatic tires.

Can also be furnished with steel bull wheels for pulling with team or truck. Full detailed information is available upon request.

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Baker Casing Shoe Co.
Bartlesville Supply Co.
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TULSA, OKLAHOMA
708 Keystone Bldg., Houston, Texas

B&A Specialty Co

Name and Address—	Barrels	Value
Roy Long Oil Co., Navasota	3,143.15	4,066.52
Riggs & Oliphant, Graham	1,070.44	1,200.26
Root, C. M., et al, Eastland	1,359.00	7,768.06
Republic Prod. Co., Houston	597,693.67	703,102.04
Roylat Prod. Co., Houston	6,912.14	8,239.56
Red River Oil Co., Tulsa, Okla.	26,041.93	32,087.56
Rio Grande Petroleum Corp., Houston	5,530.24	5,530.24
Reiter-Foster Oil Corp., Tulsa, Okla.	14,787.33	20,790.59
Ruthada Oil Co., Oklahoma City, Okla.	20,075.50	22,251.26
Rochmill, Henry, trustee, Fort Worth	3,907.06	5,188.49
Richards, C. F., trustee, Tiller 30-acre lease, Luling Oil Field, Caldwell County, Lockhart	14,522.13	14,522.13
Regna Oil Co., Saratoga, Tex.	5,937.19	6,102.02
Rubsam & Hunter, Wichita Falls	3,085.17	4,170.22
Russell & Wilson (H. O. Prideaux Lease) Wichita Falls	12,890.92	16,528.55
Ray Featherston Oil Co., Inc., Wichita Falls	2,403.12	3,254.49
Rockdale Dev. Co., Inc., Rockdale	2,013.51	2,557.16
Rhodes & Highers, Breckenridge	6,783.08	8,818.00
Rentex Oil Co., San Antonio	10,588.12	12,881.66
Rockdale Oil Co., Rockdale	225.16	279.84
Ray & Massie, Wichita Falls	18,458.16	25,168.92
Ramsel, W. T., Oil Co., Rockdale	3,976.95	5,129.36
Rosenberg, Jacob, Tulsa, Okla.	165.25	214.32
Rosenberg, Jacob, trustee, Tulsa, Okla.	51.82	65.42
S		
Seaboard Oil & Gas Co. of Texas, Wichita Falls (6-30-27)	41,884.87	56,655.63
Swicegood, F. L., Eastland (6-30-27)	76.48	100.95
Shoup, O. H., Jr., Colorado Springs, Colo.	11,289.66	18,527.48
Sommer, M. E., Albany, Tex. (6-30-27)	251.30	328.44
Staley, J. A., Wichita Falls	3,021.43	4,048.71
Stovall, E. C., Graham	25,927.29	34,525.09
Schlicher Oil Co., Beaumont	709.01	871.49
Strelsky, Joe, & Gamble, Rockdale	856.68	1,104.98
Speed, C. D., Mgr., Corsicana	201.11	234.66
Salado Oil Co., San Antonio	1,980.44	2,455.48
Shoup, O. H., Jr., Colorado Springs, Colo.	8,120.33	10,970.18
Shemen Oil & Gas Co., Pittsburgh, Pa.	102.13	132.27
Skinner, E. W., Oil Co., Saratoga	4,349.08	5,218.90
Sindorf & Sindorf, Caddo, Tex.	1,063.88	1,369.64
St. Louis Oil & Development Co., Wichita Falls	708.06	929.00
Spring Creek Oil Co., Amarillo	19,179.79	16,654.56
Slick, T. B., Oklahoma City, Okla.	10,426.77	14,570.16
Smith-Hanion, Tulsa, Okla.	155.59	198.81
Supreme Oil Co., Orange	2,692.11	3,230.58
Somerset Oil Co. of Mass., Easthampton, Mass.	14.30	164.30
San Bait Petroleum Co., Kansas City, Mo.	743.52	732.36
Sircovich, A. and Mrs. Freeman M. Thomas, Houston	981.84	1,099.65
Smith, E. L., Oil Co., Inc., Mexia	45,262.06	58,354.82
Southern Petroleum Expltn., Sistersville, W. Va.	10,097.25	10,508.88
Sullivan, M. J., Kansas City, Mo.	383.27	449.26
Summit Oil & Refining Corp., Amarillo	18,703.20	15,786.82
Swicegood, F. L., Eastland	31.68	41.81
Somerset Crude Oil & Refining Co., Somerset	4,003.55	4,844.28
Sinclair Oil & Gas Co., Houston	109,904.05	135,871.78
Saigh, N. A., San Antonio	2,727.96	3,483.13
Shaw, Archie, Burkett	12,632.54	15,420.69
Schaffner, E. N., et al, Cross Plains	3,491.42	4,795.66
Shaw, Fox & Adams, Burkett	3,652.48	4,323.22
Sessions, I. P., Rockdale	494.35	653.94
Swanner, John L., Wichita Falls	5,103.34	6,836.72
Smith, R. E., Houston	28,058.68	36,730.25
Stephens Oil Co., Sour Lake	535.36	642.43
Shappell Oil Co., Wichita Falls	52,634.23	71,554.56
Shackelford Oil Co., Putnam	2,299.27	2,923.80
States Oil Corp., Eastland	61,299.31	89,090.25
Sheldon, W. J., Electra	3,960.31	4,994.44
Sun Oil Co., Dallas	946,941.18	1,155,711.98
Schaffner-Wilson, et al, Wichita Falls	4,487.66	6,264.93
Simmons, T. K., Tulsa, Okla.	4,708.24	5,783.68
Stull, R. O., Wichita Falls	16.61	21.60
Snider, C. W., Wichita Falls	1,754.55	2,420.73
Sedwick Oil Co., Tulsa, Okla.	14,676.77	18,772.06
Simms Oil Co., Dallas	1,169,631.34	1,027,769.70
Stribling, J. C.-Hautier, No. 1 well, Llano	5,829.97	8,226.97
Sinclair Oil & Gas Co., Tulsa, Okla.	228,021.86	309,353.38
S. & W. Oil Co., Amarillo	35,514.44	28,620.96
Silurian Oil Co., St. Louis, Mo.	3,885.89	5,178.77
Sheldon Drilling Co., C. P., Electra	13,825.43	17,748.60
Saunders, John R., Wichita Falls	31.06	41.30
Southern Exploration Co., Houston	1,889.99	2,488.57
Sink, Jarl, Corsicana	160.00	188.90
Steed, Paul P., Wichita Falls	832.62	1,111.57
Staley Mashburn Oil Co., Wichita Falls	234.74	305.16
Security Drilling Co., Wichita Falls	552.19	773.07
Shaw & Rathke, Wichita Falls	57,302.43	78,163.61
Stock, H. L., Cisco	2,412.32	3,247.71
Skila-Tex Petroleum Co., Amarillo	75,505.45	65,788.77
Somerset Oil Co., San Antonio	1,195.32	1,403.40
Smith, M. L. V., Vernon	829.42	1,061.66
Stafford, W. R., Graham	397.17	444.85
Shulman, Harry, Breckenridge	3,050.76	3,782.94
Selby Oil & Gas Co., Tulsa, Okla.	57,667.66	80,934.03
Southern Crude Oil Purchasing Co., Shreveport, La.	272,543.21	174,537.08
Swensondale Oil Co., Caddo, Tex.	13,170.14	17,120.62
Skinner Oil Co., E. W., Nocona	2,334.57	2,615.05
Sunny Jim Oil Co., Tulsa, Okla.	22,713.08	20,078.36
Sitrin, Sam & Morris, Tulsa, Okla.	213.62	273.57
Shasta Oil Co. and Clifford Moores, Wichita Falls	2,019.47	2,652.98
Smith, Mrs. Jas. L., Amarillo	15,577.26	13,307.74
Smith & Bynum, Amarillo	9,955.48	8,800.20
Smith, McIntosh & Thomas, Cameron	2,904.02	3,688.11
Stroube & Stroube, Corsicana	91,877.67	114,915.64
Sheffield, Frank H., Houston	2,078.06	2,494.09
Strip, Geo. Beggs, Fort Worth	3,368.68	5,373.72
Scarborough, W. A., Burkburnett	2,864.85	3,797.78
Schimmel Prod. Corp., Fort Worth	239.96	29,253.71
Summerfield Oil Co., Tulsa, Okla.	238.38	319.43
Standard Oil Land & Leasing Co., Electra	257.32	344.80
Saratoga Oil Co., Wichita Falls	1,625.00	2,322.15
Star Drilling Co., Wichita Falls	7,741.10	10,527.89
Schulz, Ben F. and M. Pols, Wichita Falls	609.96	829.53
St. Albans, Edward, Laredo	7,002.28	7,002.28
Summerfield, M. C. and G. Roberts, Dallas	64.54	64.54
Sipe Springs Oil Co., Sipe Springs	.30	36.00
Snowden & McSweeney Co., New York, N. Y.	61,027.33	72,377.70
Schermerhorn Oil Co., Tulsa, Okla.	3,097.03	4,122.99
Sunburst Oil Co., Amarillo,	10,051.79	8,361.65
Stidham & Thrasher, Electra	344.31	369.68
Sigler Oil Co., Inc., Wichita Falls	1,600.07	1,988.61
Schoolfield, R. E., Wichita Falls	258.81	336.45
Superior Oil Prod. Co., Tulsa, Okla.	2,367.55	3,115.06
Skelly Oil Co., Tulsa, Okla.	310,131.67	304,184.19
Staley & Co., J. L., Wichita Falls	5,748.16	7,661.86
Staley, Wynne & Co., Wichita Falls	63,676.35	76,252.05
Shuler Davies Co., Brownwood	3,631.97	4,423.53
Souligny Oil Corp., Ponca City, Okla.	6.94	589.72
Shertzer Bros., Dewey, Okla.	19,291.80	25,697.38
St. Mary's Oil & Gas Co., St. Marys, W. Va.	23,948.87	27,278.22
Scott & Walker, Albany, Texas	3,299.18	4,100.49
Seybert Bros., Mooringsport, La.	2,968.93	.....
T		
Texas Dev. Co., et al (6-30-27), Eastland, Tex.	247.44	286.36
The Texas-Electra Co., Newark, Ohio (6-30-27)	378.95	514.43
The Tulsa Co. (6-30-27), Wichita Falls	627.31	825.04
Trinity Townsite Co., Dallas	898.76	1,210.39
Tegler, F. E., San Antonio	97	109.50
Trinont Pet. Co., Shreveport, La.	8,755.53	12,528.47
Thaxton, W. H., Austin	322.52	374.12
Timberlin, W. E., Wichita Falls	166.52	224.33
Triangle Oil & Gas Co., Rockdale	2,799.71	3,654.38
Texas Oil Corp., Dallas	243.76	285.74
Tannehill, L. B., Albany, Texas	18,534.81	24,149.45
The Texas-Electra Co., Newark, Ohio	373.01	507.29
Turman, L. C., Fort Worth	150,722.29	107,947.83
Tyson Oil Co., Sour Lake	671.41	895.69
Texota Pet. Co., Electra	373.68	515.63
Texas Pet. Dev. Co., Cameron	7,588.19	10,078.99
Triangle Oil Co., Brownwood	1,382.28	1,901.38
Tri-Angle Oil Co. of Amarillo, Amarillo	26,051.15	22,663.45

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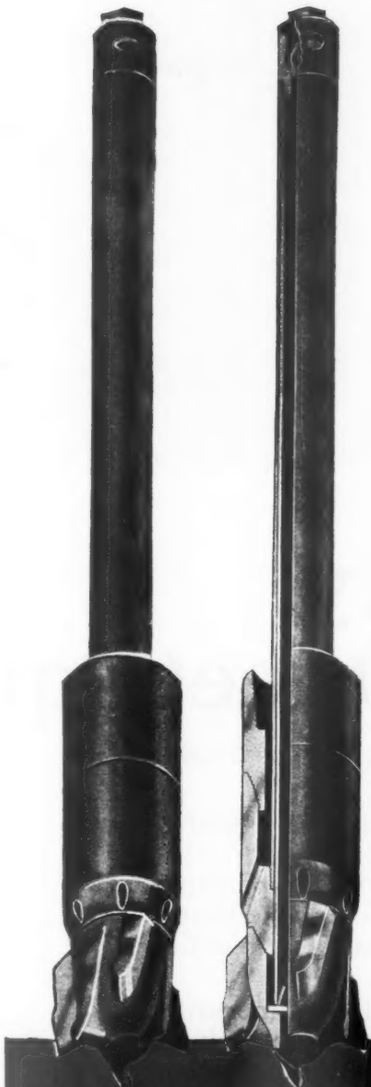

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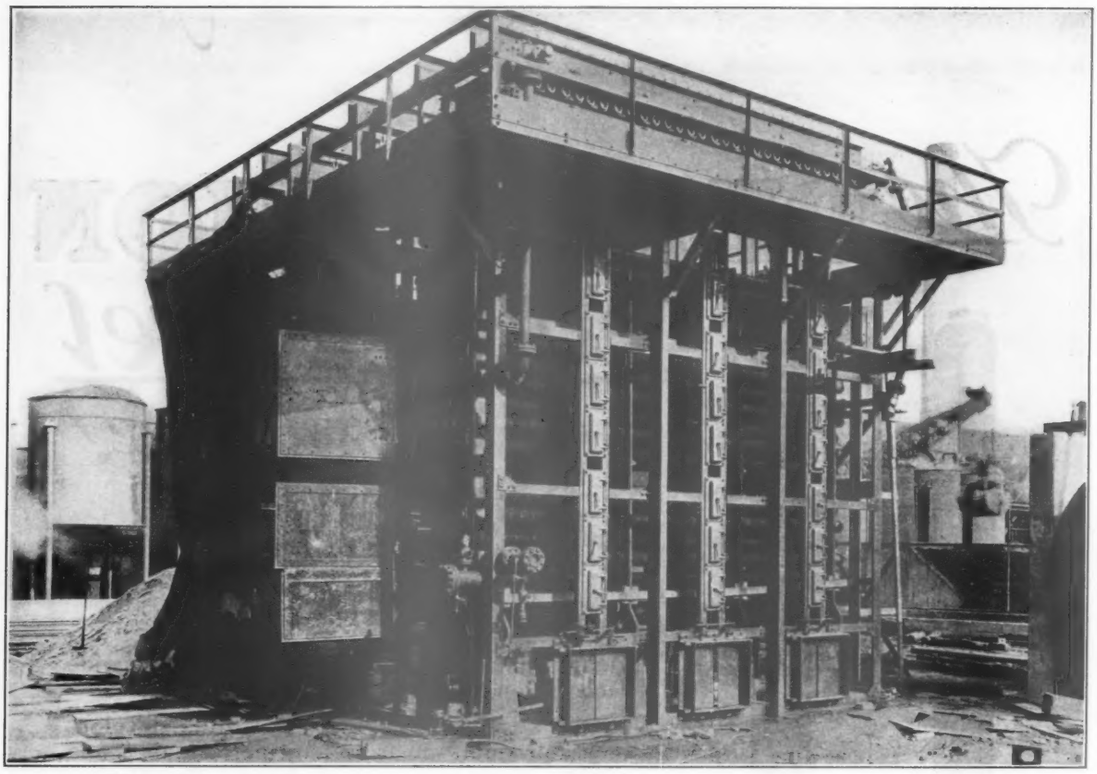

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CONDENSERS COOLING TOWERS
ECONOMIZERS EVAPORATORS
EXPANSION JOINTS FEED WATER HEATERS

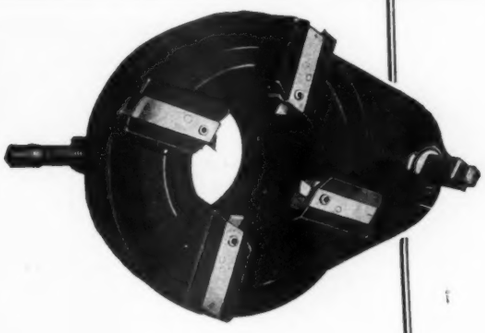
Name and Address—	Barrels	Value
Two Republics Oil & Gas Co., Laredo	10,032.89	10,032.89
The Texas Company, Houston	2,846,057.84	3,443,010.40
Tidal Oil Co., Tulsa, Okla.	474,476.94	394,120.86
Tidal Osage Oil Co., Tulsa, Okla.	19,110.74	21,026.79
Terry, H. M., Sour Lake	6,841.52	7,867.72
Theis Oil Co., Sour Lake	5,486.94	6,584.33
Transcontinental Oil Co., Tulsa, Okla.	6,317.16	8,219.65
Transcontinental Oil Co., Tulsa, Okla.	86,594.67	114,024.94
Tholl Oil Co., Beaumont	5,749.31	7,962.85
Tillery, L. J. Oil Co., Beaumont	15,334.38	18,407.14
Thompson, J. E., Humble	5.01	602.00
The Triangle Pet. Co., Inc., Fort Worth	2,049.67	2,777.45
Tidwell, R. V., Graham	8,032.83	10,654.47
Texas Consolidated Oil Co., San Francisco, Calif.	13,132.20	17,790.16
Tucker, G. A., Arlington	10.57	1,348.97
Tucker, W. B., Dallas	422.59	465.90
Tucker & Fox, Dallas	1,044.62	1,044.62
Texas Pacific Coal & Oil Co., Thurber	478,860.70	464,966.92
Texon Oil & Land Co. of Tex., Big Lake	1,871.71	1,313.14
Texas Unity Oil Co., Dallas	4,859.96	6,677.98
J. W. & D. R. Tripplehorn, Fort Worth	2,748.52	3,611.73
Thomas, H. J., Agent, Pet., Venture Co., Somerset	325.35	318.64
Thomas, H. J., Somerset	313.48	307.21
Texas Southern Oil & Dev. Co., San Antonio	1,624.01	2,435.99
Texas Fidelity Oil Corp., Louisville, Ky.	14,090.43	20,602.97
Trinity Prod. Co., Wichita Falls	695.55	978.36
Tillman, J. W., Humble	463.21	541.96
Triangle Oil Co., Wichita Falls	378.93	513.45
Texas Standard Oil Co., Houston	1,467.82	1,903.52
Travelers Oil Co., Amarillo	33,141.62	29,128.80
Texana Oil & Ref. Co.-Fitzgerald Lease, Wichita Falls	33.35	450.23
Taylor-Sibley Syndicate, Dallas	2,205.04	3,000.20
Tucker & Langford, Inc., Wichita Falls	54,249.76	73,056.47
Tidwell, H. L., Trustee, Graham	333.76	441.86
Tidwell, H. L., Trustee, Graham	438.92	579.23
Teatsorth, L., et al, Eastland	5,734.95	8,630.28
U		
United Pet. Co. (6-30-27), Brownwood	106.72	132.33
Ungren & Frazier, Putnam	39.7¼	495.18
Underwood Drilling Co.-U. C. Ward Lease, Wichita Falls	3,410.28	4,501.56
Underwood Drilling Co. (Erwin Lease), Wichita Falls	1,206.40	1,568.32
United Oil & Fuel Co., Sour Lake	1,399.44	1,679.33
Upham Gas Co. of Tex., Wichita Falls	287.61	370.20
Unice & Carpenter, Houston	84.37	9,982.21
United Pet. Co., Brownwood	79.36	101.58
U. S. Tex Oil Corp., Dallas	550.89	682.00
Unity Oil Co., Beaumont	16,809.11	20,106.53
United Pet. Co., Wichita Falls	2,261.80	3,030.83
Union Prod. Co., Rockdale	2,867.32	3,718.85
V		
Vacuum Oil Co., Houston	1,686.49	1,995.39
Val Verde Oil Co., Del Rio	22.93	2,624.10
Virginia Oil Ass'n., Fort Worth	3,323.23	4,452.15
Vergate Oil Co., Tulsa, Okla.	6,731.46	9,038.49
Van Cleave Trust, Baltimore, Md.	792.32	1,099.35
Veale, H. A., Brownwood	884.26	1,151.47
W		
Wersman, S., McKinney		
White & Duncan, Wichita Falls (6-30-27)	3,719.79	4,868.83
Wills Oil Co., Rockdale	4,678.41	6,082.54
Wilson Drilling Co. (K. K. "A." & "B." Comet), Wichita Falls	9,958.74	13,344.71
Weed-Gayle Oil Co., Beaumont	70,817.18	84,980.62
Wolfe & Son, A. T., Wichita	5,910.93	7,472.00
Wilson Drilling Co. (K. K. A & B), Wichita Falls	4,000.54	5,368.44
Wilson Drilling Co. (K. K. "C."), Wichita Falls	6,008.94	8,172.13
Wilson Drilling Co. (Snedeker), Wichita Falls	415.39	507.97
Wilson Drilling Co. (Comet), Wichita Falls	5,421.54	7,303.53
Wilson Drilling Co. (Rathke lease), Wichita Falls	4,978.63	6,486.83
Webb Oil Co., Humble	4,202.17	5,042.61
Wilson King et al, Wichita Falls	16.61	21.60
Wheelock & Collins, Corsicana	22,114.30	29,190.87
Westervelt-Noblee, Oklahoma City, Okla.	2,551.41	3,321.32
White, James H., Wichita Falls	726.84	978.08
Wichita Petroleum Co., Tulsa, Okla.	2,670.22	3,548.15
Wilson-Broach Co., The, Beaumont	12,947.79	15,537.35
Western Oil Corp., Wichita Falls	24,290.83	30,055.34
Wiles & Keech, Sklatook, Okla.	4,517.53	3,951.62
Williams, J. F., Cisco	410.26	516.25
Woody, W. C., Wichita Falls	2,219.28	3,017.97
Wo-Mac Oil Co., Wichita Falls	3,159.49	3,761.01
Woodburn Oil Corp., Dallas	7,105.47	8,711.65
Winter, J. G., et al, Cross Plains	1,876.24	2,208.62
Annie L. Witcher, Wichita Falls	2,957.76	4,256.30
Witcher & Michel, Wichita Falls	301.96	412.66
Wakefield, M. E. et al, Cross Plains	1,690.79	2,392.85
Waggoner Refining Co., Inc., Electra	29,454.95	37,276.36
Wills Oil Co., Rockdale	3,381.09	4,344.16
West Prod. Co., Houston	6,831.08	7,855.73
White, P. J., et al and Justin Oil Corp. et al, Wichita Falls	14,062.24	19,707.08
Woods & Bennett, Humble	6,679.73	8,045.75
Worth Oil Co., Wichita Falls	1.40	189.00
Wood-Benton-Lesh & McCall, Nocona	14,460.16	16,487.76
West, J. H., Cisco	3,420.64	4,577.56
Weiler, H. J., Wichita Falls	479.75	642.86
Western Oil Sales Corp., Wichita Falls	7,132.48	21,415.12
Why Not Oil Co., Inc., Mexia	6,537.62	9,442.30
Wise & Jackson, Sapulpa, Okla.	3,543.93	4,537.70
Westheimer & Daube, Ardmore, Okla.	1,651.05	2,089.29
Wilcox, H. F., Oil & Gas Co. of Texas, Tulsa, Okla.	165,793.85	174,012.93
Wallace, Charles William, Wichita Falls	35,783.42	48,958.16
Walker, B. S., Breckenridge	1,683.30	2,176.18
Williams, John H., Dallas	5,405.13	7,227.52
Wentz, L. H. (oil division), Ponca City, Okla.	93,935.51	121,581.01
Wahpoo Oil Co., Rockdale	2,888.66	3,726.37
World Oil Co., Chester L. Wise, Washington, Pa., and J. H. Jackson, Shamrock, Tex., Fort Worth	2,305.24	1,944.47
Wilkins, L. A., Burkburnett (6-30-27)	1,964.16	2,730.18
Wilkins, L. A., Burkburnett	2,523.56	3,467.28
Weaver & Pois, Wichita Falls	6,130.18	8,151.59
Watson, M. B., Fort Worth	1,000.00	1,000.00
Weldon Oil Co., Saratoga	10,999.68	11,009.42
Woodard & Lee, Houston	12,115.18	16,582.98
Wichita Prod. Co., Wichita Falls	18,917.33	25,546.01
Wampem Oil Corp., Dallas	2,863.98	3,885.54
Whaley Mineral & Realty Trust, Fort Worth	4,006.26	5,331.58
White Eagle Oil & Refining Co., Kansas City, Mo.	120.55	105,825.77
Whitehill Oil Corp., The, Tulsa, Okla.	5,446.89	7,447.25
White & Duncan, Wichita Falls	3,436.56	4,730.75
Waid, C. A., Cisco	13.52	1,836.97
Wear Counts Harris, Brownwood	363.78	420.73
Wilson, Lee, et al, Wichita Falls	8,935.89	12,138.67
Witherspoon Oil Co., San Antonio	44,670.96	56,214.27
Wilam Prod. Co., Rockdale	792.34	1,006.27
Windhorn & Pilkenton, Wichita Falls	1,423.65	1,893.45
Y		
Yount Lee Oil Co., Beaumont	3,776,083.66	4,669,262.02
Young Bros. & Alexander, Inc., Fort Worth	20,498.17	27,723.96
Yuba Oil Refining Co., Nacogdoches	1.50	225.00
Z		
Zadie Belle Oil Co., Fort Worth	375.81	503.58

CENTRAL WEST FIELDS

(Continued from Page 64)

section, years ago. This well pumped 18 bbls. initial and found its oil in the Stray sand at a depth of 1,584 feet with a chance for another pay a couple hundred feet deeper, which is the Niagara lime and still a further down pay, which is the Trenton Rock, as both lower formations have found commercial wells in both sands below the stray sand.

The Silurian Oil Co. drilled deeper its old No. 7 well on the William Ross farm, in the northwest quarter of Section 29, Petty Township, Lawrence County, and



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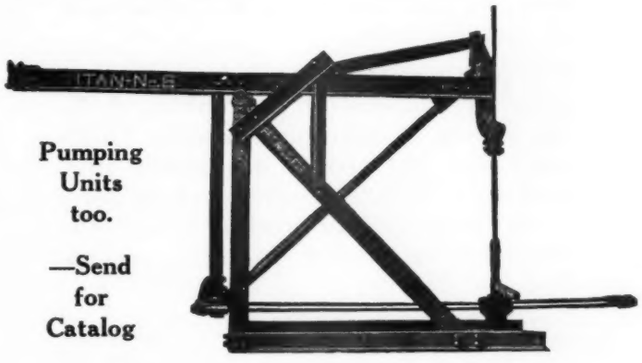

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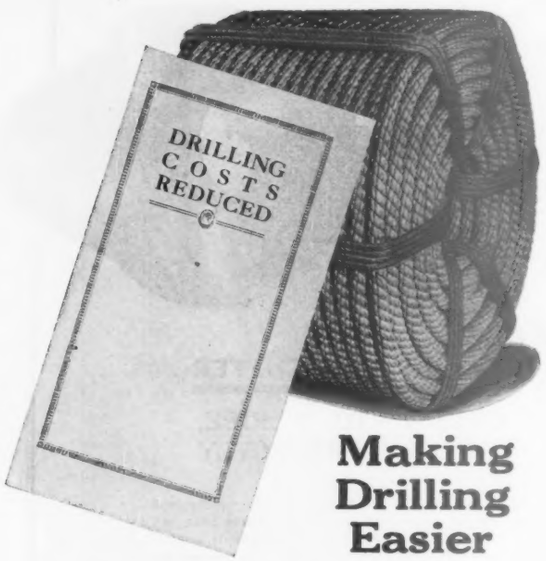

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increased its production to 15 bbls. a day. The well when first drilled found its pay at 1,348 feet, where it has been a steady producer. It was then sent to a depth of 1,683 feet and plugged back to a pay at 1,623 feet, which is a stray sand and has been put on the pump.

Central Ohio

Nine completions were made and reported from the Central Ohio Field, seven being in Guernsey County and one in Gallia County. The Birmingham Oil & Gas Co.'s second well on the Edinburn farm, Section 15, Monroe Township, Guernsey County, got its gas pay in the second Berea sand and good for 350,000 feet. No. 3, same farm, estimated at 500,000 feet and No. 4 at 1,500,000 feet. No. 5 is drilling.

Anson Henry Russell, well-known oil and gas operator of Cleveland, Ohio, who is operating the Braniger farm, Section 20, Monroe Township, same county, has just brought in some excellent gas wells from the second Berea pay at close around 1,250 feet. His No. 2 and 3 on this farm are good for 1,000,000 feet each; No. 4 was abandoned and No. 5 showed a volume of 2,600,000 feet. He is now drilling No. 1 on the Shelley Gray farm, Section 9, same township. The gas from these leases is being taken by the Ohio Fuel Gas Co. The Ohio Fuel Gas Co.'s well on the Tobin lot, Section 6, same township, is estimated at 375,000 feet.

Mr. Russell has just taken over the property of the Federal Oil & Gas Co., consisting of 600 acres, in Section 9, Monroe Township, Guernsey County, on which there are 12 Berea oil wells producing from the top Berea sand and has moved in a National drilling machine on the Gray farm, in the southwest corner of the section, and will drill to the second Berea. None of these old wells has been drilled through the top of the Berea, and as this property lies just 2 miles northeast of the big second Berea sand gas wells, the second Berea under these Federal wells looks very attractive. The second Berea pay has proven much heavier than the first pay. Mr. Russell is also head of the Birmingham Oil & Gas Co.

The Gordon Oil Co.'s wildcat on the Mary Grover farm, Section 6, Addison Township, Gallia County, is reported to have produced 570,000 feet of gas from the second Berea sand pay. This development is far to the southwest of the Guernsey County second Berea sand development and it looks as though the intervening territory might prove valuable for this formation. The Gordon Co. is working at No. 1 on the W. H. Reynolds farm, same area. Two wells are also under way in Walnut Township, same county, in Sections 1 and 23.

Michigan

No completions were reported from the Michigan fields, neither in the Saginaw Field or other counties over the State where work has been under way. The cold weather has hampered work and little is expected until early spring, when no doubt the areas within the defined limits of the Saginaw Field will be drilled up. Wicker Brothers are drilling a fourth well on their property on the east side of the Saginaw River, in East Saginaw, near Water and Carroll Streets.

The Saginaw Prospecting Co., discoverers of the Saginaw Field and owners of the largest number of producing wells in the Saginaw Field, are investigating the feasibility of getting gasoline production from natural gas in the wells. Mr. Graves, president of the company and one of Saginaw's leading citizens and business men, says "We do not yet know whether this gasoline production would be practicable from the Saginaw wells and whether the amount of gas available would be sufficient to warrant it, but we are investigating the matter."

Refinery Methods

Oil refining methods were described and pictured to the Rotary Club at its meeting at the Bancroft Hotel in Saginaw, says the Daily News, by Dr. R. T. Myrick, a member of the research department of the Standard Oil Co. of Indiana.

Showing an interesting series of motion pictures of refining plants, Doctor Myrick accompanied them with a brief description of refining methods. The pictures, besides containing actual plant photographs, included animated diagrams that made the processes clear.

Doctor Myrick also commented briefly upon the refinery the company has near completion near Saginaw, just north of Zilwaukee, a suburb, pointing out that because of the high gasoline content in Saginaw crude, some of the more elaborate processes he described were necessary in the local operations.

He also gave a short talk on the properties of various kinds of gasoline, particularly as they bear upon modern methods of automobile motor design. H. H. Keating, local manager of Standard Oil, was in charge of the program.

EASTERN FIELDS

Continued from Page 62)

Moorhead & Co. have shut down at 3,100 feet on the Grim heirs' farm.

Wood County

On Worthington Creek, Union district, Wood County, Sweeney & Nelson have moved a drilling machine to a second location on the G. W. Ralton farm. In Walker district, B. R. Crippin is drilling a test on the B. H. Bills farm. In the same district, Peter Smith is drilling in the sand on the Senator Goff farm. In Clay district, T. Connolly has shut down at his test on the N. L. Upton farm. In Union district, the South Penn Oil Co. is due in the sand on the Nettie M. Dye farm and has started to drill a second test on the same farm.

On the Little Kanawha River, DeKalb district, Kanawha County, Harley Satterfield and others are drilling a test on the Frank Davis farm. About 500 feet north of the above well, Greer Barker and others are drilling on the F. Davis heirs' farm. S. G. Roberts & Co. are drilling on the Albert Beall farm.

In Green district, Wetzel County, Schamp & Co. have started to drill a test on the W. E. Schamp farm. In Glenville district, Gilmer County, the Sears Oil & Gas Co. has shut down for orders at 1,785 feet on the A. B. Campbell farm. In Grant district, Ritchie County, Maxwell, Charter & Co. have rigged up on the B. F. Kerns farm. In Murphy district, J. G. Cothran & Co. have rigged up on the J. G. Cothran farm. In Spring Creek district, Wirt County, the Dailey Drilling Co. has moved drilling machinery to a location on the A. C. Adair farm.

In Green district, Wetzel County, Carr Brothers have started to drill a test on the Stephen Morgan farm. In Center district, the Hope Natural Gas Co. has a rig up to drill deeper an old well on the Jefferson Miller farm. In Liberty district, Marshall County, the Denver Oil & Gas Co. has a rig up on the Campbell farm.

DENVER GAS LINE TO START ABOUT DECEMBER

(Continued from Page 70)

will be developed by that company until gas is discovered and then if the well is completed as a gasser, it will be taken over by the Canadian River Gas Co. and operated by that concern. This company, in turn will deliver the gas to the Canadian River Transporation Co., which will pipe the gas to the New Mexico line, where it will be turned over to the Colorado Interstate Gas Co.

Trenches for the line will be 5 feet deep and 30 inches wide. Work will progress in both directions from Devine, Colo., and north from Dalhart, Tex. The Colorado Interstate Gas Co. and Williams Brothers, Inc., as well as Ford, Bacon & Davis, Inc., will have headquarters at Colorado Springs. Approximately 1,000 men will be employed by the first of the year and as soon as the work progresses far enough this number will be augmented to 3,000 men. A telephone line 375 miles long, paralleling the main line and branches, will be built and a compressor plant will be constructed in the field with 12,300 horsepower and another near Pueblo with 5,500 horsepower. There will be required about 166 miles of gathering lines in the field, the size of the pipe ranging from 6 to 22 inches.

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Just as an express train snatches its mail sack from the "tank town" of Today, the Fast Mail of Tomorrow may be sent hurtling through the skies.

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A tall, slender mast stands etched against the clear Western sky. It marks a little prairie town . . . too small to warrant the stopping of the Air Mail planes. From a yardarm at the top, a mail sack hangs suspended . . . a wind direction indicator shows its exact position. With a roar, the Fast Mail comes screaming up through space—there's a tug at the line—the mail sack is caught—on into the darkness of the night.

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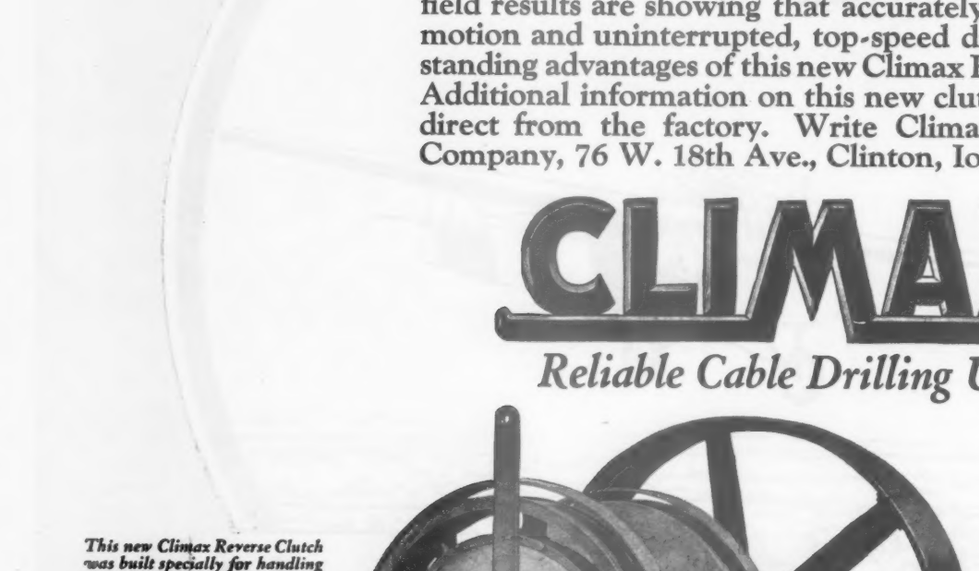

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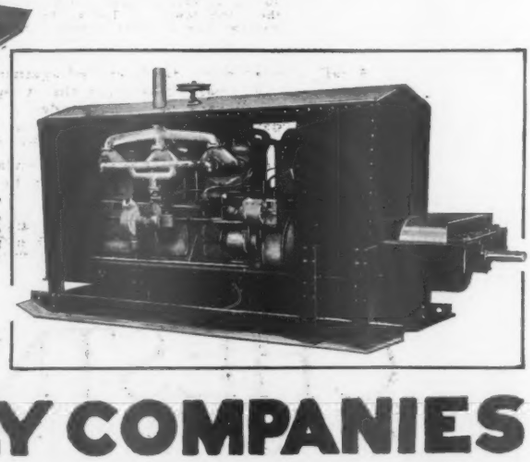

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KENTUCKY-TENNESSEE

(Continued from Page 64)

bbls. The runs for the week ending October 8 were 53,923,91 bbls.; week ending October 15, 56,259.64 bbls.; week ending October 22, 52,876.91 bbls.; week ending October 29, 58,324.94 bbls.

The Illinois Pipe Line Co. handled through its western Kentucky lines a total of 207,339.47 bbls., a gain over September of 894.50 bbls. The bulk of this big production comes from the Ohio County Field.

The Paragon Development Co.'s runs for October from Barren County amounted to 19,177.30 bbls., and from Monroe, Cumberland and Clinton Counties, 4,-917.64 bbls., or a total of 24,094.94 bbls.

The Paragon Development Co. ran in October from Clay County, Tennessee, fields a total of 3,678.25 bbls., and from Pickett County, 202.71 bbls., making this company's total runs from the two States for October 27,975.90 bbls., a gain over the September runs of 2,374.23 bbls.

Western Division

Work is still going strong in Ohio, Daviess and McLean Counties, but is not confined to any certain pool, much of the work being of the wildcat order. Late advice from the southern portion of Daviess County and across the line in McLean County, where the Dimmick Brothers recently brought in a good well on the Ratliff farm, is that the next few weeks will see at least a dozen new tests under way. This is in territory south and southwest of Owensboro and west of Ohio County. Should the test now under way on the Burns farm, in the Browns Valley section, and the nearest test to Owensboro, come in a commercial producer of any size, there will be a hurried rush to get drilling outfits in. The past few days has also brought attention to territory west of Owensboro in the coal fields, ranging from 3 to 5 miles due west. Operations southward are believed to be deeper than the Ohio County Field, and drilling naturally will be longer and results are still some distance off, as it will require at least a few weeks to know for a certainty whether oil will be found in these numerous tests or not. Contractors are doing their work in a careful manner, as the territory is new to them.

Work has quieted down some in the rich Ambrose Pool and more attention is being attracted to the Sunnydale Pool to the southeast a few miles. The territory between the two pools is being tested and some fairly good production has been uncovered.

Two wells now said to be getting down to depths where something should show up are watched with much interest. They are the test by S. J. Patrick on the Burns lease in Browns Valley and that of Percy Jolly on the Tom Stevens lease, approximately 3 miles away from the Burns test.

Ohio County

The best producer for the week, Young & Lee's No. 1 on the Ollie Ezell 80 acres in Ohio County, is reported showing for 100 bbls. initial. In the heart of the Ambrose Pool the Creek Drilling Co.'s No. 10 on the Sally Early 112 acres was cased with a string of 595 feet, found sand from 595 to 610 feet, and shot with 60 quarts, and good for 15 bbls.

The Ohio Oil Co.'s No. 11 on the J. C. Ellis farm, at the eastern edge of the Ambrose Pool, set 648 feet of casing, got sand from 648 to 662 feet and went to a total depth of 669 feet. Shot with 60 quarts, the well is reported good for 5 bbls.

Southeast of the Ambrose Pool and northeast of the Mt. Moria Church, James C. Ellis drilled his second test on the Mary Cundiff farm, setting a string of 667 feet of casing, sand at 667 to 682 feet and total depth of 690 feet, where it was shot with 80 quarts, responding with a 20-bbl. initial production. Ellis drilled No. 2 on the Ada Keith farm, south of the Cundiff farm, which also proved a 20-bbl. initial producer. In this well a string of 506 feet of casing was set, sand from 506 to 538 feet, and shot with 120 quarts. Ellis's No. 2 on the B. L. Gossett farm, south of the Keith farm and a mile and one-half southeast of the big production on the J. R. Weller farm, set a string of 537 feet of casing, got sand from 537 to 547 feet and was shot with 60 quarts, the well making 10 bbls.

In the Sunnydale Field, Daley & Lowman's No. 3 on the Joe Maiden 357-acre farm came in a dry hole at a depth of 515 feet, making the third dry hole on this big acreage. Thresher & Shouse are in the sand at a test on the Mark Renfrew lease of 53 acres, same field, and reported making a fair showing. Earl Patton's No. 5 on the Mary E. Wilson 194 acres, same field, is also in the sand and has all indications of a good producer. Wool Oil Co. is drilling near the sand at No. 1 on the R. A. Duke farm, same field.

Other interesting wells under way in Ohio County are: The Ohio Oil Co.'s No. 1 J. R. Greer; George Boles' No. 1 Emil Estridge; Young & Lee's No. 2 Ollie Ezell; Evans & Townsend's No. 1 Dan Mitchell; Daugherty and others' No. 8 Cora Wells and No. 4 Hill Rhodes; Creek Drilling Co.'s No. 2 Bartlett heirs and No. 13 Fannie Lake; White Plains Oil & Gas Co.'s No. 1 Everett Maiden 225 acres; Globe Oil Co.'s No. 1 Vincent J. Steel, near the town of Burton to the west from the Ambrose Pool.

The Wood Oil Co.'s No. 2 on the J. C. Ralph 21-acre lease is showing for a fair producer, as is its No. 4 on the J. C. Smith 151 acres, the latter in the Sunnydale area.

Warren County

Southwest of Bowling Green, in Warren County, P. H. Lavelle's No. 10 well, 450 feet from the north line and 160 from the east line of the W. R. Hunton farm, District 5, is a 20-bbl. pumper at a depth of 1,089 feet.

In the same district, Orrin Wood's test, 600 feet from the north line and 650 from the west line of the J. W. Vanmeter-Stewart farm, came in a dry hole in the deep sand at a total depth of 1,225 feet.

Allen County

In the Gainesville Field, northeast of Scottsville, in Allen County, W. P. Harley's No. 3 on the Riley Reed farm was a dry hole at a depth of 275 feet. The Allen Oil Corp. got one of the same kind at No. 9 on the W. L. Motley farm at 400 feet.

Hancock County

Out from Pellville, in Hancock County, H. L. Ogle and others' test on the Alva Cauley 60 acres is reported a duster.

Daviess County

The Ohio Oil Co. is drilling a test on the Lawrence Roby farm, adjoining the John Roby farm, southwest of Pellville, in Daviess County, and in what is called the Roby Pool, which was opened up some months ago by the Leeper Oil Co.

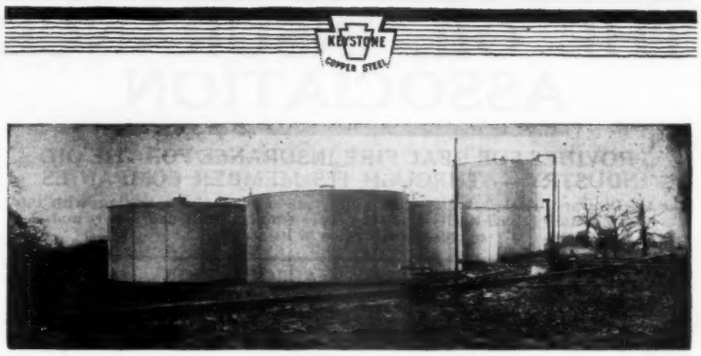
Oil Land Litigation

Lawsuits involving one of the big leases in the Ohio County oil field in Kentucky will be filed at Hartford by H. A. Birkhead, attorney, representing descendants of J. K. Mitchell, who died in 1877, leaving his widow, Jane Mitchell, and 12 children, says the Owensboro (Ky.) Messenger. The Messenger further says: "Ollie Ezell, who is now claiming the ownership of two adjoining tracts of land, with a total acreage of 200, is made defendant, with other heirs of the original owner of the property. An unauthorized deed, the petitions to be filed in three separate suits declare, by the widow of J. K. Mitchell is the cause of the imperfect title under which Ollie Ezell files claims.

"Wayne Mitchell, a grandson of J. K. Mitchell, is plaintiff in one of the suits against Ollie Ezell and other grandchildren and their descendants. Lewis V. Massie, another grandson, will file another suit; and Herbert Mitchell, a grandson, will file the third.

"Two wells producing 50 bbls. of oil per day have been drilled on the land and a third one is being drilled, and when developed as to its possibilities the plaintiffs and defendants express the opinion the tract will be worth from $150,000 to $300,000.

"According to the petition, Jane Mitchell, widow of J. K. Mitchell, original owner of the land, undertook to sell the entire tract as though it belonged to her in fee simple, when as a matter of fact she owned but a dower interest which



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Franklin Fire Insurance Co., Philadelphia, Pa.
Girard Fire & Marine Ins. Co., Philadelphia, Pa.
Girard Underwriters, Philadelphia, Pa.
Glens Falls Insurance Co., Glens Falls, N. Y.
Great American Ins. Co., New York, N. Y.
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Harmonia Fire Insurance Co., Buffalo, N. Y.
Hartford Fire Insurance Co., Hartford, Conn.
Home Fire & Marine Ins. Co., San Francisco, Cal.
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Newark Fire Insurance Co., Newark, N. J.
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Old Colony Ins. Co., Boston, Mass.
Palatine Insurance Co., London, Eng.
Patriotic Insurance Co. of America, New York, N. Y.
Pennsylvania Fire Ins. Co., Philadelphia, Pa.
Philadelphia Fire & Marine Ins. Co., Philadelphia, Pa.
Phoenix Assurance Co., London, Eng.
Phoenix Insurance Co., Hartford, Conn.
Providence Washington Ins. Co., Providence, R. I.
Queen Insurance Co., New York, N. Y.
Reliance Insurance Co., Philadelphia, Pa.
Rochester Dept. of Great American, New York, N. Y.
Royal Exchange Assurance Co., London, Eng.
Royal Insurance Co., Ltd., Liverpool, Eng.
Scotch Underwriters, Edinburg, Scotland
Scottish Union & National Ins. Co., Edinburg, Scotland
Security Insurance Co., New Haven, Conn.
Sentinel Fire Insurance Co., Springfield, Mass.
Springfield Fire & Marine Ins. Co., Springfield, Mass.
St. Paul Fire & Marine Ins. Co., St. Paul, Minn.
Star Insurance Co. of America, New York, N. Y.
Sun Insurance Office, London, Eng.
Svea Fire & Life Ins. Co., Gothenburg, Sweden.
Superior Fire Ins. Co., Pittsburgh, Pa.
Travelers Fire Insurance Co., Hartford, Conn.
Union Assurance Society, London, Eng.
Union Insurance Society of Canton, Hong Kong
United Firemen's Insurance Co., Philadelphia, Pa.
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expired at her death, and had inherited a one-twelfth interest from one of her children who had died.

"This one-twelfth interest, the petition asserts, is all that Ollie Ezell owns. Ezell bought the land from a son-in-law to whom Mrs. Jane Mitchell undertook to sell it during her lifetime. The other heirs now by their petition declare that Jane Mitchell sold only the one-twelfth interest which she inherited from the child who died, and the remaining eleven-twelfths interest belong to them.

"Plaintiffs set up the fact a considerable quantity of oil has been taken from the land, and call upon the circuit court to compel Ezell and Dr. L. C. Young and his associates, who are drilling on the land, to make an accounting of the amount of oil that has been taken from the land and when this has been ascertained that the court order direct Ezell to pay to them all but one-twelfth of the one-eighth royalty.

"Further, the plaintiffs ask that the land be sold as a whole, because it is indivisible as to its oil value, and that the proceeds be distributed amongst the heirs of J. K. Mitchell, as their interests may appear. In the memorandum lodged with the petition, it is pointed out that recently $16,000 was paid for a one-sixteenth interest in a lease almost adjoining the 200-acre tract in controversy, and that the indications are that the Ezell tract, as it is known, is of as great value as the Cora Wells tract, its neighbor."

New Oil Company

The Rough River Oil Co. is a new concern to enter the western Kentucky area with a capitalization of $30,000. T. H. Ballantine, H. C. Holder and P. A. Nall are the leading lights of the concern, all being citizens of Calhoun, McLean County, where the newest field was opened up by the Dimmick Brothers on the Ratliff leasee.

CANADIAN FIELDS

(Continued from Page 59)

is in the Irma-Wainwright Field a production of heavy crude from Edmonton-Wainwright Oils No. 1 amounting to 30 bbls. a day, with a potential production from a number of other wells in that area. In the Skiff Field, near the international boundary, Devenish Petroleum No. 1 has a fairly proven production of 250 bbls. a day of heavy crude, which has been temporarily shut off while the test was drilled deeper. This gives an aggregate estimated production from the Alberta fields of 1,714 bbls. a day.

Royalite Oil Co. No. 4 naphtha gusher reported for the month of October a crude naphtha production of 1,347 bbls., making an average of 559½ bbls. a day. The total of the three producing Royalite wells, including crude naphtha recoveries from Nos. 1 and 3, amounted for the month to 17,598.4 bbls. Deliveries of crude naphtha to the Imperial Oil, Ltd., pipe lines for October from the Royalite, McLeod, Illinois-Alberta and Vulcan wells totaled 21,908.7 bbls.

Royalite Production

The Royalite No. 4 production for October of 17,347 bbls. with a daily average of 559.5 compares with a September production of 16,487.1 bbls., averaging 549.5 bbls. a day. In October, 1926, the production of Royalite No. 4 totaled 15,618 bbls. a day, an average of 503 bbls. a day. There is thus a production increase over October, 1926, of 46 bbls. a day. Royalite No. 4 is now entering on its fourth year of production, having been brought in October, 1924.

Illinois-Alberta Oil & Refining Co.'s No. 1, LSD 14, Section 12-20-3w5, still continues to increase slightly its crude naphtha production, its latest average being slightly over 100 bbls. a day. Illinois-Alberta No. 2, same LSD, is reported at 656 feet, and drilling.

Vulcan Oils No. 1, LSD 11, Section 13-20-3w5, after being frozen tight for five weeks, has again come into production, and is reported making 100 bbls. a day, the same as before the freeze-up. Efforts were made to recover the tools lost in the hole when it was first brought into production, but these attempts had to be abandoned when the well again blew open. Vulcan No. 2, same LSD, has resumed drilling at 3,850 feet.

McLeod Oil Co. No. 1, LSD 16, Section 1-20-3w5, caught fire recently when the string of tools struck a spark from the casing and ignited the gas flow from the hole. The damage is estimated at $9,000, including the derrick, foundation timbers, and 5,000 feet of cable. A new derrick has been ordered and the debris is being cleared preparatory to rigging up again. McLeod No. 1 was for a number of years a shallow producer from the Dakota sand, and reecntly the owners started to deepen the well to the Madison limestone. It was at 3,090 feet when the fire took place. Drilling will likely resume around December 1. McLeod No. 3, same LSD, is pumping, with a daily production of 40 bbls. of light crude from the Dakota sand.

British Dominion Oil Corporation, LSD 4, Section 5-20-2w5, is reported drilling at 6,050 feet, with 6-inch casing down to 6,011 feet. The casing will be carried down further as soon as the weather moderates. Okalta Oils No. 1, LSD 1, Section 1-20-3w5, is at 4,120 feet and running 8¼-inch casing. A potential production of light crude, estimated around 25 bbls. a day, is being cased off in order to deepen the test to the Madison limestone.

Making New Hole

Spooner Oils No. 1, LSD 12, Section 13-20-3w5, is making new hole after cementing 6-inch casing at 4,690 feet. At this depth the test is about 40 feet in the limestone, with an estimated production of 500,000 feet of wet gas. A fair show of crude oil was met in the Fernie shale horizon, but was cased off. Shareholders of Spooner Oils, Ltd., held their annual meeting recently at Calgary, when the following directors were elected: president, A. G. Spooner; directors, H. R. Spooner, C. E. Snyder, Robert Wilkinson and Albert Mutz. George A. Barber is secretary-treasurer. Messrs. Wilkinson and Mutz succeed A. J. Flood and L. H. Stack, who retired from the directorate. The financial statement shows assets of $91,242, including $77,742 in Dominion of Canada bonds, $1.500 in shares of Ellis Oils, Ltd.; $5,000 in shares of the Regal Oil & Refining Co., and $7,000 from the sale of the Ellis Oils lease in Montana. Cash on hand amounted to $6,050.48, and accounts receivable to $681.56. The development account showed an expenditure of $130,028.51 for plant, equipment and development expenses; of which $99,847.52 was spent on No. 1 well and $15,300.32 on No. 2. All the equipment was reported ready for No. 2 well, but it is planned to finish first No. 1, which is now in the top of the Madison limestone and should be completed before the end of the year. Capital stock sold amounts to $222,032. Spooner Oils, Ltd., some time ago purchased the assets of Ellis Oils, Ltd., securing 20 acres in the Turner Valley Field north of the Spooner Oils acreage and 40 acres with two producing wells in Montana, in return for 63,660 shares of Spooner Oils, Ltd., stock.

In the north end of the Turner Valley Field, Stockmen Oils, LSD 1-2, Section 27-29-3w5, is reported at 4,550 feet and working on casing. The well has a wet gas flow estimated at 3,000,000 feet a day from the upper horizons, though it has not yet reached the Madison limestone.

Resumed Drilling

Calmont Oils, LSD 2, Section 1-20-3w5, is reported to have resumed drilling at 4,175 feet after underreaming and lowering casing. New Valley Oil Co., LSD 4, Section 6-21-2w5, is at 2,080 feet and shut down owing to cold weather, while coal and supplies are being hauled. Mayland Oils No. 1 has spudded in in LSD 10, Section 17-19-2w5. The location is three-quarters of a mile south and a little east of Home No. 1. The test is financed by British Columbia and Calgary men, and Union Development Co. has the drilling contract.

In the Moose Mountain district, Signal Hill Oil Co. No. 2, LSD 9, Section 34-23-5w5, is drilling at 1,502 feet with slight traces of oil and occasional small pockets of gas. The test will continue through the cold weather.

In the Morley Indian Reserve area, Gold Coil Oils is reported resuming at

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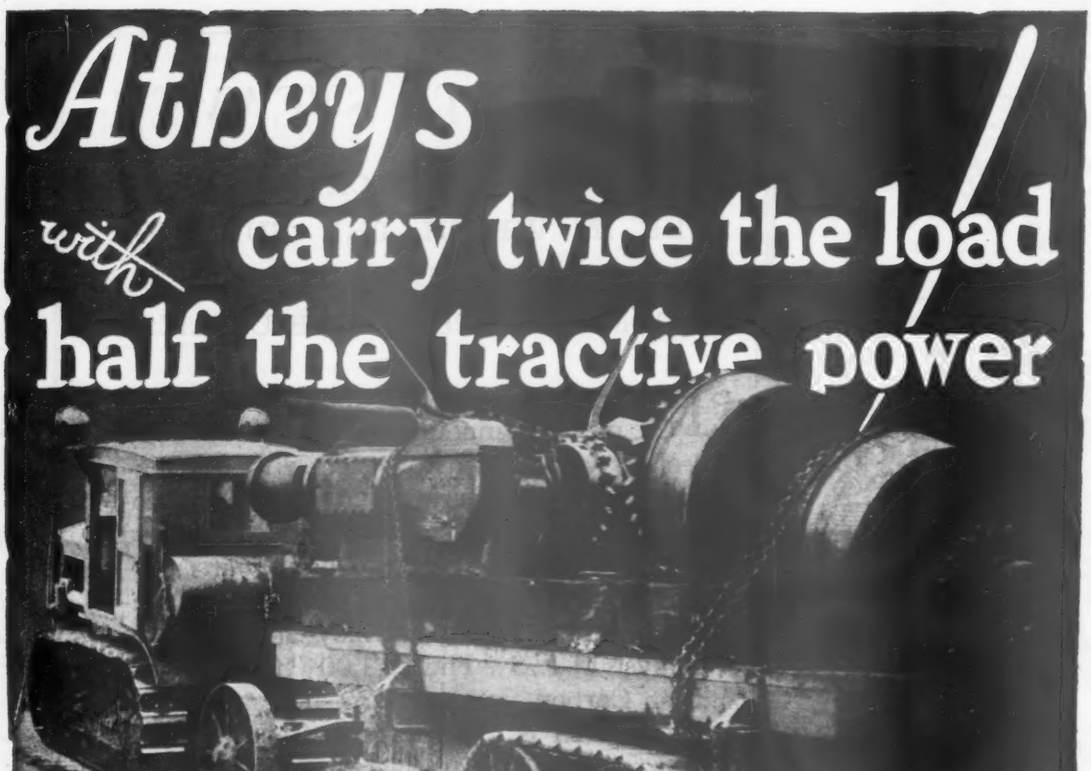

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IT BRIDGES THE SOFT SPOTS

3,928 feet after a temporary shutdown. Wabash Oils, which has been shut down at around 300 feet, is changing from cable tools to a diamond drill outfit. The Kootenay formation at this point proved exceptionally hard. Traces of oil and gas have already been met, but have been cased off.

Skiff Field

In the Skiff Field, near the international boundary, Devenish Petroleum No. 1, LSD 5, Section 27-5-14w4, is reported to have got the top of the Madison limestone around 3,160 feet. Drilling is being discontinued at this point, as previout tests in the border areas drilled into the Madison failed to secure production in that horizon. The hole will be plugged back to the Ellis, at 3,090 feet, where the first heavy crude production was encountered. No further oil or gas showings of importance having been met in the deeper drilling. Bailing from the sand at 3,090 feet showed a production of around 250 bbls. a day which, it is claimed, will be doubled if a gas lift is installed. The well will be finished as a producer in this horizon. No further announcement has yet been made regarding the Imperial Oil, Ltd. drilling operations on the Devenish Petroleum acreage, which were to follow completion of the deep drilling of Devenish No. 1; but it is understood No. 2 will be located a little west of No. 2.

In the Warner district, Gas Production & Transportation No. 1, NE Section 21-4-18w4, is reported drilling in soft shales at 1,450 feet.

Pincher Creek Area

In the Pincher Creek area, Mount Royal Oil & Gas Co. No. 1 LSD 4, Section 7-6-1w5, is reported drilling at 900 feet, with a fair flow of wet gas from the 15½-inch casing. The logs are reported to correspond very closely with those in the Turner Valley Field, except that drilling on the Mill Creek anticline in the Pincher Creek district starts about 2,000 feet lower. As a result, there is a possibility of production around 1,500 feet, so that the Mount Royal test may get results by the end of 1927.

In another portion of the Pincher Creek area the Henry L. Doherty interests of New York through a local subsidiary, the Alberta Gas & Fuel Co., is planning to put down three tests. It is understood that an appropriation of $600,000 has been set aside for drilling in Alberta, the development campaign to be spread over a period of four years. Lyn M. Farish will be in charge of operations. Dr. L. C. Snyder of New York, who geologized the district for the Doherty interests, is president of the Alberta Gas & Fuel Co. A tentative location for No. 1 well has been spotted on the Waterton River, a short distance east of Waterton Lakes Park. A drilling outfit used by the Henry L. Doherty & Co. for deep tests in Prince Edward Island is being brought west by the contractor for the Alberta Gas & Fuel Co. drilling.

In the border areas, the remaining drilling equipment at the abandoned Imperial Oil, Ltd. Erickson Coulee No. 1 well in LSD 13, Section 8-1-12w4, is being loaded for shipment. It is reported that interests which have recently leased in the Manyberries district will drill a test on the J. M. Courtney grazing lease in NW Section 34-4-5w4. Imperial Oil, Ltd. is understood to be interested in some of the recent filings of this area.

In Saskatchewan, the Simpson Oil Co. test in Section 9-20-26w2, is reported drilling below 1,500 feet, with some additional showings of oil but no commercial production. On the Ribstone-Blackfoot structure, London-Ribstone Oils, LSD 14, Section 10-43-28w3, is reported at 1,000 feet and drilling.

In the Irma-Wainwright Field, east central Alberta, Interior Oil Co., Section 36-44-7w4, is at 2,100 feet and drilling.

Ontario Fields

In the Ontario fields, Union Natural Gas Co. No. 19, Mackie farm, Dawn Township, Lambton County, is reported drilling around 1,100 feet.

In the old Tilbury Field, Kent County, Union Natural Gas Co. No. 276, Radmor farm, Romney Township, is drilling below 800 feet. Union No. 277, N. Baldwin farm, is drilling around 1,100 feet.

In Dover Township, Kent County, Ajax Oil & Gas Co. drilling on the Gilbert Reaume farm, is reported down more than 900 feet. This test is an offset to the Union Natural Gas Co. No. 1 discovery well, which some 10 years ago opened the Trenton Field in Dover Township. Union No. 1 was one of the two best wells in the field, No. 13 being larger. It was at one time thought a large Trenton production would be developed, but widespread drilling in all directions from the discovery well proved on the whole, disappointing. Upwards of two dozen deep tests were drilled, of which only about eight were producers, some of them quite small. The actual production simmered down to some six closely grouped wells of the Union Natural Gas Co. near Lake St. Clair, and two small wells of the Petrol Oil & Gas Co. a short distance further east. Union No. 1 started as a gasser and later developed some incidental oil production, and several of the wells produced both gas and oil. The production was encountered in the Trenton limestone at varying depths, but approximating 3,500 feet.

In Wellington County, the derrick of the F. L. Snively test on the Alex Neubauer farm, Puslinch Townships, near Guelph, was wrecked by a runaway bullwheel. The test was drilling below 1,700 feet, with Trenton limestone production at 2,600 feet as the objective. A few small gas pockets were reported in the upper horizon. The test is again being rigged up.

In Moore Township, Lambton County, the Osborne Oil Producers, Ltd. has gone into voluntary liquidation and the company's assets are being offered for sale by the liquidator, W. McIntosh of Petrolia. The properties include leases on 250 acres, Lot No. 5 and west one-quarter Lot No. 4, Concession 12, Moore Township, with six producing wells and pumping plant and equipment.

GULF COAST FIELDS

(Continued from Page 55)

Oil Co.'s No. 1 Fitzsimmons is drilling around 4,360 feet.

At Goose Creek, Gulf Production Co.'s No. 14 Hoffman Gaillard was bailing for a test as the week closed. It is in a formation at 2,790 feet. Gulf's No. 21-A Wright is to be put on the pump at 2,550 feet. Humble Oil & Refining Co.'s No. 4 A. Smith, an old well being deepened, found sand 330 feet from bottom at 2,398 feet. It has been washed to 2,347 feet. Powell Oil Co. is to sidetrack obstructions in the hole at No. 6 Bryan, an old well to be deepened. Southern Exploration Co. set strainer at 3,410 feet in No. 6 Freeman-State, but it sanded up. Humble Oil & Refining Co.'s No. 73 Simms-Smith is in sand and boulders at 567 feet.

In the Humble district, Gulf Production Co.'s No. 1 Burt Griffith encountered sticky shale around 5,585 feet. Marland Oil Co. and Humble Oil & Refining Co.'s No. 2 Warren, at Hockley, is in a hard sand at 1,926 feet.

Houston County

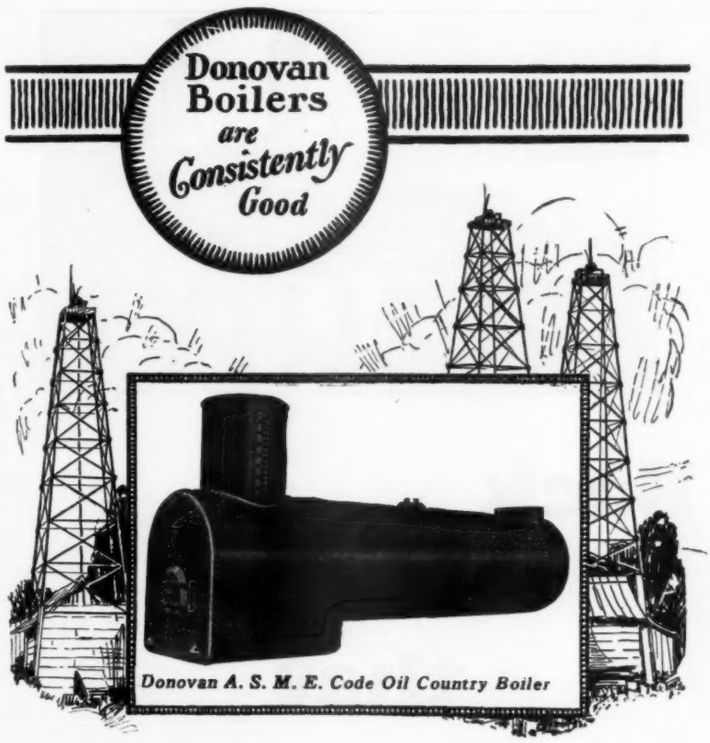
The Texas Company has a derrick up for No. 1 Carter, 2 miles northeast of Lovelady.

Jasper County

Raymond and associates are drilling at 3,298 feet in No. 1 Kountze, 16 miles northwest of Jasper.

Jefferson County

Sun Oil Co.'s No. 4 Price, completed earlier in the month, but not previously reported, came in with an initial production of 300 bbls. of fluid, 50 per cent salt water, from sand at 5,225 feet. No other completions were recorded in Jefferson County the past week. However, Battleship Oil Co.'s No. 1 Weed, Spindletop, is waiting to be put on the pump, having an oil sand around 5,050 feet. J. O. Davis and Kinnear's No. 1 Gladys cored a sand at 5,558 feet. Gulf Production Co.'s No. 16 Marrs McLean, Spindletop, is another Jefferson test to be put on the pump. It is down 4,650 feet. This company's No. 10 Marrs-McLean is drilling at 4,975 feet, and No. 6 Jack & Duff at 3,975 feet. Magnolia Petroleum Co.'s No. 2-A fee is drilling below 5,825 feet, and No. 7 fee below 4,190 feet. Rio



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Carbon Res.	Under 1.5%	Carbon Res.	Under 1.5%

TEXAS PACIFIC COAL AND OIL COMPANY
FORT WORTH, TEXAS

Bravo Oil Co. is drilling deeper in No. 2 T. & N. O., an old well. Sun Oil Co.'s No. 6 McLean has pipe stuck at 5,475 feet. Total depth of the hole is 6,045 feet. This company's No. 16 McLean is drilling below 5,000 feet, and No. 17 around 4,900 feet.

Also of interest at Spindletop are locations for four new tests staked by Yount Lee Oil Co. These are Nos. 46 and 47 Gladys City and Nos. 46 and 47 McFadden. This company made a location for No. 45 Gladys City several weeks ago.

At Big Hill, Freeport Sulphur Co. has encountered cap rock at 875 feet in No. 3 Staiti. This company's No. 4 Staiti is drilling below 260 feet. Gulf Production Co.'s No. 4 Bordages, Fannette, is drilling hard sand below 3,280 feet. Jim McMurray is cutting drill stem at 3,900 feet in No. 1 Crosby. Total depth of the hole is 4,105 feet.

Liberty County

The Texas Company has completed No. 7 Merchant, Hull Field, pumping 143 bbls. of oil with some water from a sand at 3,225 feet. This is an old well worked over. Empire Gas & Fuel Co. set the strainer in No. 27 Barngrover at 3,140 feet but it sanded up and no test was made. Gulf Production Co.'s No. 87 Phoenix is drilling below 4,075 feet. No. 1 Phoenix, being deepened, is down 2,125 feet. Gulf also is to work over and deepen No. 11 Thomas fee. Hull Oil Co.'s No. 7 Harrison is down 3,240 feet. Navarro Oil Co. is trying to sidetrack in No. 3 Harrison preparatory to deepening. Republic Production Co.'s No. 49 Dolbear is drilling below 2,410 feet, while No. 89 Dolbear is down below 3,475 feet. The Texas Company has started drilling in No. 7 Hannah Vacuum and is down below 300 feet.

At North Dayton, Deering & Kayser have a location for No. 1 Pruett. Harrison Oil Co.'s No. 2 Quintette has been abandoned temporarily at 4,594 feet. It is in a sand and shale formation. The Texas Company's No. 1 Harvard, Davis Hill, encountered a water sand at 2,525 feet. Titwell and associates' No. 1 Gardner is shut down in gumbo at 3,508 feet.

Matagorda County

Valley Oil Co.'s No. 1 Hudson, Markham, has been abandoned at 2,870 feet. John Deering and associates' No. 1 Caney started drilling and were in sand and gravel at 220 feet. Rycade Oil Corp. and Humble Oil & Refining Co.'s No. 5 Kountze is reaming. It is in a sandy shale and lime at 3,776-91 feet.

Montgomery County

Cordell & Lynne have abandoned No. 1 Westcott, west of Pinehurst, after drilling to 1,735 feet. It was in gumbo and lime. Brains and associates' No. 1-A Fitch, 3 miles northwest of Spring, is drilling sand and shale at 3,475 feet.

Orange County

Gulf Production Co.'s No. 3 Hager & Moore, an old well deepened to 3,614 feet, is flowing 50 bbls. No. 2 Lee Hager fee, another old well, also is to be gone into and deepened. Gulf's No. 18 Lee Hager fee is drilling below 4,150 feet. Tehoma Oil Co.'s No. 16 Chesson has been abandoned at 4,260 feet. Humble Oil & Refining Co. is to deepen No. 1 Kishi-Lang. Rex Petroleum Co.'s No. 6 Carbello is shut down at 4,500 feet. Rycade Oil Corp. is drilling below 3,025 feet in No. 13-E State, and Sinclair Oil & Gas Co.'s No. 4 Granger below 3,325 feet.

Waller County

J. R. Garrett and associates' No. 1 Garrett, 12 miles south of Hempstead, encountered a water sand around 773 feet.

Washington County

W. J. Becker and associates' No. 1 Grater has been abandoned after drilling only 16 feet. This test was abandoned earlier in the month but has not been reported previously. Other Washington County tests are at a standstill.

Wharton County

Texas Gulf Sulphur Co. has abandoned two tests in the Boling Field, the No. 1 F. Kostelink, and No. 6 Banker. The first drilled to 850 feet in gyp encountered at 520 feet. The second had gyp from 695 to 1,000 feet. Weed-Gayle Oil Co. tested salt water in No. 10 Banker and abandoned it at 437 feet. Benson & Abercrombie, however, have a well at Boling, in No. 1 Woytek making an initial production of 190 bbls. of pipe line oil from a shallow sand at 433 feet.

Eight new locations are reported from the Boling Field as follows: Benson & Abercrombie, No. 3 Kostelink; Gayle & Patterson, No. 3 Bay; Gulf Production Co., No. 8 Chase; Texas Gulf Sulphur Co., No. 1 Urckert and No. 1 Werner; Weed-Gayle Oil Co., No. 5 Bay and No. 6 Bay and No. 9 Keller.

Hyde Production Co.'s No. 1 Fotjek, Boling Field, was drilling in gumbo at 2,570 feet at last report. Nail and associates are shooting and pulling drill stem in No. 1 Croom. This is the test which the derrick was pulled in and a driller killed. This hole is at 683 feet in a sandy lime formation.

LOUISIANA GULF COAST

Acadia Parish

The Texas Company's No. 2-B Latrielle, Section 47-9s-2w, Evangeline Field, has been reported completed pumping 20 bbls. of oil from sand at 1,964 feet. In the same field, Cline and associates' No. 6 Conklin is drilling below 1,510 feet. Evangeline Oil Co.'s No. 1 Conklin is drilling around 1,740 feet. Port City Oil Co. is rigging up for No. 8 S. F. S. and has a location staked for a new test, No. 8 Jennings-Haywood. Salt Dome Oil Co. also is rigging up for a test at Evangeline, the No. 1 Cruse, as is The Texas Company for No. 106 Latrielle. The latter company's No. 2 Rayne heirs is drilling below 3,550 feet.

Ascension Parish

Gulf Refining Co.'s No. 3 United Land Co., Sorrente Dome, still is standing at 956 feet with 10-inch casing cemented at 837 feet.

Calcasieu Parish

In the Edgerly district, Rex Petroleum Co. has completed No. 5 Hunter estate as a gas well at 3,984 feet. Gulf Refining Co.'s No. 10-B Higgins, which came in flowing 600 bbls. of net oil with some additional salt water sediment, now has settled and is to be put on a pump. Calcasieu's only new well during the week was in the Vinton district where Vinton Petroleum Co.'s No. 52 Gray is pumping 150 bbls. daily from sand at 2,350 feet.

At Edgerly, C. M. Crotty is going into No. 7 Lillard, an old well, and is drilling deeper at 1,850 feet. Davis & Walker's No. 1 Lyons is drilling gumbo and lime at 3,580 feet. Gulf Refining Co.'s No. 43 Bright Penn is shut down in sand at 3,425 feet. Hercules Oil Co. is to pull the liner and strainer in No. 3 Hercules and drill deeper. This well was completed early in November flowing 50 bbls. of oil an hour but the past week has been flowing only salt water. West Edgerly Oil Co.'s No. 1 Krause & Managam is drilling below 4,275 feet.

At Vinton, Gulf Refining Co. is drilling below 3,300 feet in No. 43 Star-Vincent. Vinton Petroleum Co. has started drilling in No. 9 Gordon and at last report was below 250 feet.

On Starks Dome, Gulf Refining Co.'s No. 7 Lutcher-Moore drilled a salt water sand around 4,600 feet. No. 8 Industrial cored a sand at 4,417 feet.

At Lockport, Newton Drilling Co. has been reaming to set strainer and test sand at 2,491-2,500 feet. Vacuum Oil Co. and Gulf Refining Co.'s No. 3 Farquahar is drilling below 3,625 feet. These operators also are to work over No. 3-A Farquahar. No. 4 Bayou-D'Inde State is drilling at 3,815 feet, and No. 2 Frieber & Wolf at 5,650 feet.

Union Sulphur Co. has a rig up for No. 722 fee in the Sulphur district.

Cameron Parish

Yount Lee Oil Co.'s No. 5 State Land, Hackberry, has been reported abandoned in hard sandy lime at 5,350 feet. Calcasieu Oil Co. is reported to be making a location in the East Hackberry district opened two weeks ago by its No. 2 Caldwell producer. This test will be the No. 1 Oliver and is reported as being 150 feet from the No. 2 Caldwell.

At Sweet Lake, Pure Oil Co. is fishing for the liner lost in No. 3 Sweet Lake at 5,897 feet. This company is to pull the liner in No. 4 Sweet Lake. No. 2 Sweet Lake still is pumping around 50 bbls. of salt water daily.

Evangeline Parish

Tom Hincy and associates' No. 1 Du-

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cide Guillery, Pine Prairie, is drilling rock at 1,920 feet.

Iberia Parish

Gulf Refining Co. has pulled the strainer in No. 3-Z State, Faussa Point, and is drilling gumbo around 860 feet.

Iberville Parish

Union Sulphur Co. has staked a location for No. 1 Wilbert in the Atchafalaya district, and also one for No. 1 Schwing.

St. Martin Parish

Ohio Oil Co. is to whipstock in No. 3 Martin and drill deeper. This test showed good for only 2 or 3 bbls. daily from a formation where the casing was perforated at 1,150 feet. The present total depth of the hole is 1,185 feet. Rycade Oil Corp.'s No. 1 Atchafalaya is shut down waiting on fuel. It is in sand and lime at 3,896 feet.

St. Mary's Parish

Louisiana Exploration Co. is ready to resume drilling in No. 1 Blanche, having moved in a heavy rig. The hole is down 2,632 feet.

Terre Bonne Parish

Southern Gas Co. has encountered a sand at 1,420 feet in No. 3 South Down which it will test. Terre Bonne Gas Co. is drilling gumbo at 2,750 feet in No. 1 Gaidry.

LA.-ARK. WILDCATS

(Continued from Page 50)

tion 5-13-13. He plans to prospect the block much as he and associates prospected Bellevue before drilling the discovery well, drilling to the Nacatoch and, if he finds results justify it, drill a deep test where he finds the Nacatoch highest.

Dixie Oil Co.'s entry into Sabine Parish also caused some attention as it has held off from exploring that territory as have all other major companies save Arkansas Fuel Oil Co. Rig is up for No. 1 Steinfelt in the SE cor. of Section 20-10-12, about 1½ miles northeast of the discovery well in Pleasant Hill.

The next wildcat to which attention will be drawn is McDonald and others' No. 1 Pelt, in Section 9-15-22, Nevada County, Arkansas, which, with 8-inch casing cemented at 1,976 feet is due to test 15 to 20 feet of sandy shale and sand which showed oil some time during the week. The formation encountered is said not to have produced in the Irma district of Nevada County, about 12 miles northeast, and this and the location being just south of the fault worked out by Humble Oil & Refining Co. a year or two ago, make the forthcoming test of more than passing interest.

NORTH LOUISIANA

Bienville Parish

Lake Bisteneau Gas Co.'s No. 1 State, Section 16-16-10, is in sandy shale at 1,847 feet. Louisiana Petroleum Co.'s No. 1 Hays, Section 18-16-5, has resumed drilling after a two weeks' shutdown at 1,680 feet on account of lack of water and is down 2,080 feet.

Bossier Parish

Doern and others have shut down at 2,830 feet on No. 1 Bollinger, Section 9-22-11, waiting orders. H. S. Goodwin has set 8-inch casing with shoe at 2,808 feet (corrected depth) in No. 1 Curtis, Section 2-16-13, to test 7 feet of sand. Walker and others' No. 1 Antrim, Section 28-22-13, is drilling at 2,420 feet.

Caddo Parish

Ohio Oil Co.'s No. 1 Thompson, Section 32-23-16, is drilling at 2,562 feet. Tubbs and others' No. 1 Hines, Section 9-14-16, is in chalk rock at 1,950 feet. Woodley & Collins have cemented 6-inch at 1,923 feet in No. 4-B Knight, Section 2-15-12.

Catahoula Parish

S. D. Hunter's No. 2 Tensas Delta, Section 21-9-7e, is drilling at 2,100 feet. Lochnager Oil & Gas Co.'s No. 1 McMillan, Section 29-9-6e, is drilling at 1,000 feet. Standard Oil Co. is in gummy shale at 329 feet in No. 1 Tensas Delta, Section 23-8-5, with no casing yet in the hole.

DeSoto Parish

Benson Oil Co., drilling No. 1 Wolff, Section 3-10-13, near the town of Benson, where oil and gas in commercial quantities were indicated by a well that blew in, caught fire and burned for a week or more in 1920, is drilling at 1,740 feet. Magnolia Petroleum Co.'s No. 1 Logan, Section 17-10-12, north of Pleasant Hill production, is drilling shale at 3,265 feet. R. O. Roy has derricks up for No. 1 Tracy in Section 3-13-13 and No. 1 Whitaker in Section 5-13-13.

Claiborne Parish

Magnolia Petroleum Co.'s No. 1 C. C. Lee, Section 16-22-8, passed out of shale and lime at around 4,100 feet and has been in straight lime for the last 300 feet, drilling at 4,298 feet.

Franklin Parish

Louisiana Petroleum Co. began drilling No. 1 Tensas November 10, set 10-inch at 200 feet and is drilling at 800 feet. This is a new location 600 feet west and 200 feet south NE cor. Section 11-11-6e. Pittsburgh Exploration Co.'s No. 3 Moore, Section 12-11-6e, is drilling at 1,000 feet.

Rapides Parish

Collins Brothers, who staked location for a townsite well at Tioga last week, have begun drilling No. 1 Allen, Section 25-5-1w.

Sabine Parish

S. P. Borden and others, developing a block of wildcat acreage just west of Pleasant Hill production, began drilling No. 1 Logan, Section 36-10-12, November 12, set 10-inch casing at 107 feet and are drilling at 325 feet. Dixie Oil Co. is drilling its first well in Sabine, rigging up No. 1 Steinfelt, 330 feet north and 330 feet west SE cor. SW Section 20-10-12. L. M. Emlet cemented 6-inch casing at 3,517 feet in No. 7 Bauman-Hicks, Section 14-7-14, and is waiting for cement to set, total depth 3,592 feet. He lost the hole on No. 1 Mansfield Lumber Co., Section 15-7-14, at 515 feet, skidded the derrick 30 feet south and is rigging up to start again on the same well. Longoria and others, who had derrick up for No. 1 Burkett in Section 9-9-13, have abandoned the location.

Webster Parish

S. A. Lane, drilling No. 1 Miles, Section 24-17-9, 1½ miles southeast of Heflin, is drilling at 990 feet.

West Carroll Parish

Palmer Corp. began drilling No. 1 White, Section 2-19-10, November 10, and has set 12½-inch casing at 200 feet. Phillips Petroleum Co.'s No. 1 Marion, Section 32-20-9, is drilling at 2,840 feet.

Winn Parish

Ohio Oil Co.'s No. 1 Edenborn, Section 31-10-4, in Cootchie brake, is drilling gumbo at 2,400 feet. No. 2 Rolen, account 1, Section 5-12-1w, Sikes district, is in lime rock at 2,535 feet. H. M. Roark and others fished a bailer out of No. 3 Southern Minerals Co., Section 19-11-3w, and are reaming to bottom, total depth 450 feet.

ARKANSAS

Nevada County

McDonald and others' No. 1 Pelt, Section 9-15-22, has cemented 8-inch casing at 1,976 feet to test 13 feet of sandy shale from 1,982-95 feet and under that 2 feet of hard sand, both showing oil, total depth 1,997 feet. Wright and others began drilling November 7, set 10-inch at 40 feet and 6-inch at 1,148 feet in No. 3 Groves, 480 feet west and 150 feet south NE cor. NW NW Section 12-14-20.

Ouachita County

A. T. Grayson tested dry in No. 1 J. W. Reynolds, Section 21-14-17, at 1,756 feet after a show of oil and salt water and is waiting orders. H. M. Harrell has derrick for No. 1 Ponder, 395 feet west and 390 feet north SE cor. Section 18-12-17, 10 miles northwest of Camden. Magnolia Petroleum Co.'s No. 1 Stout, Section 28-14-16, is in hard sand rock at 3,045 feet. Booth and others' No. 1 Rowland, Section 8-17-11, is washing to bottom, total depth 2,590 feet, having been shut down at that depth for the past three weeks.

Union County

Grimes Brothers are drilling No. 1 Williams, Section 8-18-14, at 1,605 feet. W. R. Keever cemented 6⅝-inch casing at 2,153 feet in No. 4 Ezell, Section 12-17-15. Lion Oil & Refining Co. is rigging up to drill No. 1 Horn, Section 17-17-13, about 3 miles southeast of the Ohio Oil Co. wells in the Champagnolle district. Pitcher and others' No. 1 Arkansas Timber Co., Section 21-17-11, is drilling at 850 feet.

Calhoun County

Genther and others' No. 1 Stout Lumber Co., Section 3-14-16, is drilling at 2,560 feet.

Columbia County

The Texas Company's No. 1 Alexander, Section 8-17-19, is shut down in shale at 2,472 feet waiting orders after failing to get a showing in the Nacatoch formation topped at 1,803 feet.

Garland County

Chawood Oil Co. set 6-inch with packer at 635 feet in No. 1 Malvern Lumber Co., Section 17-25-17, bailed dry, and are arranging to resume drilling, total depth 1,682 feet. H. H. Givan is waiting on fishing tool to retrieve bit lost at 3,025 feet in No. 1 Garrett, Section 1-3-19.

CALIFORNIA FIELDS

(Continued from Page 60)

ting up two new rigs for No. 1 Campbell and No. 28-A Marine, both of which should be spudded in within a week or 10 days. Although there is a definite tendency to drill as deep as possible, consistent with safety, there will undoubtedly be a large number of producers finished above the 6,000-foot level with good results. The Richfield's No. 1 Kelly, a new well just completed, come in this category, as it showed satisfactory production, 4,098 bbls. of clean 31.9 gravity oil daily from 5,717 feet. The Union has the makings of a rather promising well in No. 13 Long Beach Community, as it is showing plenty of kick at 5,608 feet and would have come in prematurely a few days ago if preparations had not been made for such an eventuality. The Union is also putting up two new rigs on this property, both of which will have the deep sand as their objective. The Shell is getting active in the Long Beach Field and although many operators contemplate redrilling and deepening former upper zone producers the Shell is concentrating its activities on new work almost exclusively. The Alamitos lease will bear the brunt of this development campaign, although additional new drilling is getting under way on the Binkley, Cresson, Patton-Wilson and Nesa properties. The General Petroleum, Richfield, Superior and Pan American are also increasing the scope of work. The General Petroleum has new rigs going up on the Clock, Jonah Jones and K. & H. leases, while the Superior is making preparations to augment work on the Britton, Crow and Swaffield properties. The Pan American should finish No. 3 Anderson, a deep well, within three weeks, when the crew will be shifted over to the Chainey lease, where a new rig is going up for No. 4. The California Petroleum recently spudded in two new wells and with rigs going up for No. 4 Robinson and No. 4 Schilling this company appears to be starting an aggressive development program.

Seal Beach

The potentiality of the new deep Kenkel zone encountered by the Superior in the town lot area at Seal Beach has not yet been determined, although something definite may materialize soon. No. 1 Kenkel, the well which picked up this heretofore unknown sand, will be given a series of tests beginning with the bottom of the hole at 6,020 feet, in an effort to determine the source of the water which has prevented clean production. The productivity of this new zone will not be determined until the water sand has either been located or cased off. If the water is due to bottom water this horizon may be found productive and result in some additional drilling, while if the oil sand and water sand are closely affiliated it will be of no special consequence. The town lot area of the Seal Beach Field, while it shows a rather favorable production to date, is one of the best evidences of the evils of intensive drilling and operators are now aware that this area did not even warrant one-half of the drilling operations undertaken. Very few wells drilled in the town lot area will ever pay out. George F. Getty and a few other companies will probably show a profit as a result of their operations, but as a whole this work has been a losing and costly proposition. Even the Pan American and Petroleum Securities, who pioneered this section, will probably close their operations in the red. The latter wrote off about $250,000 a short time ago as a result of the abandonment of five drilling projects which never produced a single barrel of oil. These were No. 1 Bott, No. 1 fee, No. 1 Lieberman, and Nos. 1 and 2 Bryant lease "B", and it is a foregone conclusion additional abandonments will be listed. The Universal Consolidated was another concern which listed a recent abandonment, the company pulling up stakes on No. 1 Enloe, which originally came in flowing 1,200 bbls. per day from 4,985 feet last June, although this initial was only maintained for a very short period.

Huntington Beach

Drilling operations in the Huntington Beach Field resulted in the completion of two large wells. These were No. 6 Mathews & Burman of the World Petroleum and No. 31 Bolsa Chica of the Standard Oil Co. The former, in the town lot section, was recompleted as a 940-bbl. well after being redrilled and deepened from 3,753 feet to 4,361 feet. It is one of the largest completions listed in this section for some time. In addition to the crude oil production, the well is yielding approximately 500,000 feet of saturated gas daily, the casinghead content of which is approximately 3 gallons per thousand feet treated. Drilling operations in the town lot sections have been getting smaller each week, although there are four new rigs going up with the probability that work will be started on another. The Standard's No. 31 Bolsa Chica in the older section showed substantial production upon conclusion of the final production test early in the week. It is being listed as a 765-bbl. flowing well from the 4,376-foot level, and although the output is cutting about 7 per cent it may clean up after the well has been on production for a short time longer.

Richfield-Brea Olinda

The Richfield district, which has witnessed a revival of work following a several-year period of inactivity due to the prolific tendencies shown by other areas subsequently opened up, yielded an 880-bbl. flowing well to the General Petroleum when that company put No. 2 Mullin on a production test at 4,589 feet early in the week. The property upon which this well is located belonged at one time to the Merchants Petroleum Co., a pioneer operator and, while the upper zone production was never very heavy, development work in the lower zone has recently proven highly remunerative. When the Merchants Petroleum ran short of funds it turned over the Pyne property to the Continental Oil Co. and the Mullin lease to the General Petroleum. The Continental immediately undertook to make a test for deep sand production and it was this concern's well which caused the revival of work in the Richfield district. The company subsequently finished several other prolific deep zone producers and should duplicate its success with No. 6 in the near future as this well is going ahead at 3,390 feet. The Union, discoverer of the Richfield district, should finish three new wells in this field within two weeks and No. 27 Chapman and Nos. 5 and 11, on the Stern lease, the wells in question, are expected to show favorable production. There were no developments of particular interest at Brea Olinda with the possible exception of the production test by the Union on its No. 3 Olinda, an outpost. This well carried down to 5,324 feet, will be given a chance to produce from showings encountered between 3,100 and 3,500 feet. Two new wells, No. 71 Stearns of the Union and No. 43 Fullerton of the Brea Canyon Oil Co., are scheduled to get under way within 15 days but with this exception drilling operations are at a temporary standstill, although the Shell has been consistently running about four strings of tools. Over in the Inglewood Field the Standard finished No. 54 on Los Angeles Investment Lease No. 1 a few days ago as a 165-bbl. pumper from the 2,346-foot level. Work in this field has been rather spasmodic during the past few years due to the scarcity of undrilled locations and no increase is anticipated provided op-

erators continue their present policy of allowing the deep sand to remain intact.

Ventura Avenue

The Shell recompleted No. 12 Edison in the Ventura Avenue Field early in the week and this well, which originally came in doing 550 bbls. daily from the 6,183-foot level last April, was returned to production flowing 490 bbls. after being redrilled and deepened to 6,561 feet. A check of work under way indicates the probable completion of about five wells during the next 30 days. The Shell does not have any immediate completions in sight, although Nos. 17 and 18 on the Edison lease should both be on production within 30 days. The Associated, however, has four wells which look good for early production and they should be finished soon unless some steps should be taken to hold off their completion. The wells are Nos. 44 and 50 on the Lloyd lease, No. 10 Hartman and No. 4 McGonigle, all below the 6,000-foot level. The Petroleum Securities, with two new wells on the Willett lease and a similar number on the Orton, will probably finish two new producers during the next five weeks. The Bolsa Chica and General Petroleum look good for about one well each before the close of the current year.

Kern River

The prevailing low price for heavy crude has not proven a deterrent to operators along the Kern River front and this field, which has been exceptionally inactive for several years, has witnessed a rather active drilling campaign during the past 12 or 14 months. George F. Getty and the Marland Oil Co. are responsible for the present work as their pioneering operations about two years ago resulted in the development of commercial production along the front. Each succeeding month has witnessed an increase in the amount of work and that this area has proven profitable is evidenced by the recent bids received on oil and gas leases covering 280 acres of government land. The California Petroleum and Pan American were successful bidders, the consideration aggregating $672,000. E. L. Doheny, president of the Pan American Petroleum Corp., secured the most favorable piece by offering $240,000 cash, or an average of $2,625 per acre for this unit, which comprises 160 acres. Leases on the remaining 120 acres, which consisted of two other separate units, were acquired by the Midland Oilfields, a subsidiary of the California Petroleum Corp., which concern turned the trick for a total of $252,000, or an average of $2,100 per acre. Practically every other major company attended the auction.

The property leased during the week will undoubtedly be developed rapidly and, based on the output of adjoining propty, field production may be increased about 5,000 bbls. daily as a result. The Pan American lease must be drilled within a short time as it has already been offset on all sides and the company will be obliged to drill at once to protect its investment. Two wells were finished along the Kern River front but neither was of any particular consequence. George F. Getty added another producer on the Lehnhardt property when No. 25 was put on the beam at 2,362 feet. This new well registered an initial of 110 bbls. daily, the oil testing 15.6 degrees and showing a cut of 2 per cent. Getty has one other incompleted drilling project on this property, and this well will just about conclude his lease obligations. Additional work will undoubtedly be undertaken on the Grady lease and this project, together with No. 1 McDougal, should be spudded in shortly. The Petroleum Securities brought in No. 6-A, in Section 22-28-27, as a 130-bbl. pumper from the 2,497-foot level which will be followed into production by No. 7-A and No. 2-B in the same section. The Standard did not undertake any development work in this area until quite recently but it has taken first rank since starting several months ago and present operations contemplate the completion of six or eight new wells during the next 30 days.

Northern California Wildcats

The southern part of the San Joaquin Valley Basin is probably the hottest wildcat area under development at present. From a geological standpoint the accumulation of oil in commercial quantity may be expected at many points in Kern County and prospectors are going over this entire area with a fine-tooth comb. The Pacific Eastern's wildcat at Bakersfield has resulted in the manifestation of considerable interest in the possibilities of the southern part of the San Joaquin Valley Basin. This company has not yet succeeded in securing commercial production but the fact the company has been acquiring additional acreage can lead to but deduction. The Edison district, southeast of Bakersfield, jumped into the limelight as a result of a reported promising indication in the General Petroleum's wildcat at that point. The company has logged several surface indications and since this section is a possible theoretical interval on the Bear Mountain shear zone the company stands an excellent chance of opening up a new field. The district northwest of Bakersfield also presents possibilities similar to the Union Avenue and Edison districts to the south and practically all of the major companies and a number of smaller independents have been consistently leasing in this general locality for more than a year. The Pacific Eastern recently secured 160 acres in the Delano area and another 160 acres northwest of McFarland. The Superior tied up 160 acres east of McFarland and another quarter section near Delano. The Standard's activities resulted in the acquisition of an 80-acre community lease north of the Mount Poso Field. The Fruitvale, Union Avenue and Edison districts should be watched closely during the next 60 days as a new field may be opened up. Wildcat operations in Santa Barbara County reveal the presence of two rather interesting tests under way at Santa Ynez and in the vicinity of Santa Barbara. In the former area the San Marcos Syndicate, under the direction of Elliott & Clark, is rotating ahead in a brown shale at 2,998 feet and, while drilling has been rather slow and tedious up to the present due to an extremely hard conglomerate, better footage can be expected from now on. The Twin State Oil Co. is making preparations to drill a test just outside of the city of Santa Barbara and actual spud should be made in the very near future. The Standard seems to be pretty well sold on the possibilities of the Montalvo section in Ventura County for preparations are being made to drill a number of shallow post holes for structural survey work. The Standard recently abandoned a 6,799-foot hole in this area and will spend the next several months in collecting data on general structural conditions before starting another deep test.

Southern California Wildcats

The Shell has found a little evidence of production in its San Fernando wildcat at 4,472 feet and, while the present show may not result in commercial production, it is considered favorable and may result in the drilling of another hole if this test is not found productive. Several wildcats have been drilled in the San Fernando Valley during the past 10 years but so far no one has ever been able to get commercial production. The Standard drilled two deep dusters years ago on the Mission property of the Franciscan Fathers and, while one or two minor showings were logged commercial production was not secured. The Petroleum Securities also took a crack but it too came away with nothing of a concrete nature to show for its efforts except a lot of work and a red ink charge against the profit and loss account. The Standard was apparently not entirely satisfied that the area was sterile for the company re-entered this district a few months ago for the second time. This hole is still under way. The Associated's discovery well at Potrero, which is being deepened in search of a lower sand, was reported down 5,044 feet several days ago and while no official announcement has been made it is reported that a rather favorable oil sand has been encountered just below the 5,000-foot level. The Hurst Oil Corp. has temporarily suspended operations on its Inglewood wildcat but drilling is expected to be resumed in the near future. The Petroleum Securities has not yet reported anything of special importance in the Fairview-Newport area but the company's geological staff apparently deems this area somewhat promising as additional acreage has recently been tied up. The Monterey Park Oil Co. logged a little oil and gas in its wildcat at Monterey Park a few days ago and this test will therefore be watched very closely.

NORTH LA.-ARK.

(Continued from Page 50)

ing broken sand and shale at 4,474 feet.

Elm Grove and Sligo—J. S. McCullough is setting 6-inch at 1,568 feet on No. 4 Hodges, Section 25-16-12. R. O. Roy's No. 1 Werner, Section 7-17-11, is still a derrick. Sligo Syndicate set a short string of 4½-inch at 1,698 feet in No. 2 Smith, Section 24-17-12, and is bailing to test, total depth 1,706 feet.

Caddo Parish

Pine Island — Arkansas Natural Gas Co. is coring No. 1 C. W. Lane, Section 13-21-15, at 3,908 feet. This is an old well completed May 6, 1926, as a 45,000,000-foot gas well at 3,613 feet. No. 2, on the same lease is temporarily abandoned at 3,742 feet. Bussa & McGoldrick have No. 7 J. D. Bickham, Section 23-21-15, waiting on standard rig at 1,604 feet. Dixie Oil Co.'s No. 9 Clark, Section 14-21-15, is drilling at 2,910 feet; No. 9 Caddo Mineral Lands, Section 23-21-15, is in red shale at 3,872 feet; No. 92 Dillon, Section 13-21-15, began drilling November 14, and is down 140 feet; No. 4 H. H. Huckaby, in Section 11-21-15, is burning, total depth 2,635 feet.

Haynes Brothers' No. 2 Spell, Section 15-21-15, is cementing a cavity at 3,093 feet, the second encountered in the last 200 feet. Magnolia Petroleum Co.'s No. 8-A Hampton, Section 15-21-15, is drilling at 3,342 feet; No. 21 Robertshaw, Section 23-21-15, is being put on air lift, total depth 3,698 feet; No. 22 Robertshaw set 10¾-inch casing at 2,315 feet. Ohio Oil Co.'s No. 25 E. K. Smith, Section 12-21-15, is drilling at 5,085 feet. The Palmer Corp.'s No. 1 Sellington, Section 17-21-14, bailed casing dry at 3,694 feet and has resumed drilling. Rogers & Jenson have staked location for No. 1 Smith, 200 feet south and west NE cor. SW NE, Section 22-20-15. Simplex Oil Co. is drilling 6-inch plug at 2,204 feet in No. 4 Thomas, Section 15-20-15.

The Texas Company is drilling No. 50 Caddo Mineral Lands, Section 23-21-15, at 3,930 feet; No. 10 J. K. Herold, Section 14-21-15, is drilling at 3,654 feet; No. 15 D. H. Raines, Section 15-21-15, is fishing for drill stem at 4,025 feet. Woodley & Collins' No. 1 McVey, Section 23-19-14, is shut down waiting for new boiler following explosion of one they were using which cost the lives of two men and serious injuries to four others on November 13. Total depth of the hole is 2,100 feet.

Greenwood district—W. H. Cross has 8¼-inch casing cemented at 930 feet in No. 1 State Line Hunting & Fishing Club, Section 17-17-16, and is waiting for cement to set. Magnolia Petroleum Co. has abandoned No. 2 W. M. Bell, Section 6-17-16, on which it had derrick up but had not started drilling; No. 1 J. W. Furrh, Section 28-18-16, is coring shale at 1,983 feet and No. 1 John Furrh, Section 32-18-16, is coring the same formation at 1,962 feet. State Line Oil & Gas Co. began drilling No. 1 Amanda Sharp, Section 22-18-16, November 12, set 12½-inch casing at 84 feet and is drilling at 650 feet.

Oil City, Vivian and Hosston—W. D. Chew has derrick up for No. 7 fee, 2,080 feet south, 1,760 feet west, NE cor. Section 33-21-16. Standard Oil Co. cemented 6-inch casing at 2,291 feet in No. 54 Helpman, Section 16-21-16. Standish Oil Co.'s No. 1 Jolly, Section 22-22-15, is shut down at 1,039 feet waiting on standard rig.

DeSoto Parish

American Controlled Oil Co.'s No. 1 Lanier, Section 7-11-11, is waiting on standard rig after swabbing at the rate of 400 bbls. of oil from 17 feet of sand, 2,718-35 feet, and is rigging upon No. 2 Lanier, in the NW cor. NE SW, Section 5-11-11. Dixie Oil Co.'s deep test, No. 1 Jenkins, Section 9-12-11, is drilling lime at 5,754 feet. Magnolia Petroleum Co.'s No. 1 Logan, Section 17-10-12, Pleasant Hill district, is drilling shale at 3,265 feet.

LaSalle Parish

Urania—Elbert Petroleum Co. has derrick up for No. 3 Urania, 480 feet west and north SE cor. SE SW, Section 7-10-2e. Pima Petroleum Co.'s No. 10 Urania, Section 7-10-2e, is waiting on standard rig at 1,538 feet. Zoder and others' No. 6 Urania, Section 7-10-2e, is waiting on standard rig at 1,516 feet.

Monroe District

Morehouse Parish — Consolidated Carbon Co., which abandoned No. 1 Perry, Section 14-20-4e, last week on account of an artesian flow at 370 feet, has moved over 200 feet north and is rigging up for the second hole. Natural Gas Products Co.'s No. 10 Tensas Delta, Section 27-22-4e, is drilling at 1,950 feet. Ouachita Natural Gas Co.'s No. 7 Smith began drilling November 17. This is a new location 1,900 feet south and 112 feet west of the most northerly corner of irregular Section 38-20-4e. The Texas Company's No. 1 Siveley, Section 22-20-6e, is fishing for drill stem at 3,880 feet.

Ouachita Parish—Imperial Oil & Gas Co. cemented 6-inch casing at 2,105 feet on No. 2 Stubbs, Section 13-19-3e; No. 3 Stubbs is a new location 1,457 feet north and 60 feet west of the southeast corner of the same section. Industrial Gas Co. cemented 6-inch casing at 1,169 feet in No. 1 McGee, Section 3-18-4e. Jordan Drilling Co. is drilling No. 1 Miller, Section 18-18-5e, at 1,212 feet. Ladell Properties' No. 45 fee, Section 20-20-5e, has 6-inch casing cemented at 2,173 feet. Ouachita Natural Gas Co. is fishing for drill stem at 2,120 feet in No. 2-A D'Arbonne, Section 34-19-3e. Southern Carbon Co. set 8-inch casing at 810 feet in No. 8 Fairbanks, Section 38-19-4e, and is drilling at 1,170 feet. West Virginia Oil & Gas Co. is rigging up to drill No. 5 fee, Section 5-18-4e.

Union Parish—Carter & Goodwin's No. 1 Security, Section 7-23-1e, which shut down last week after getting a show of oil in 2 feet of sand 2,250-52 feet followed by 5 feet of water sand, is still waiting orders, total depth 2,257 feet. Interstate Natural Gas Co.'s No. 1 Steele, Section 36-20-3e, cemented 6-inch casing at 2,107 feet.

Richland Parish

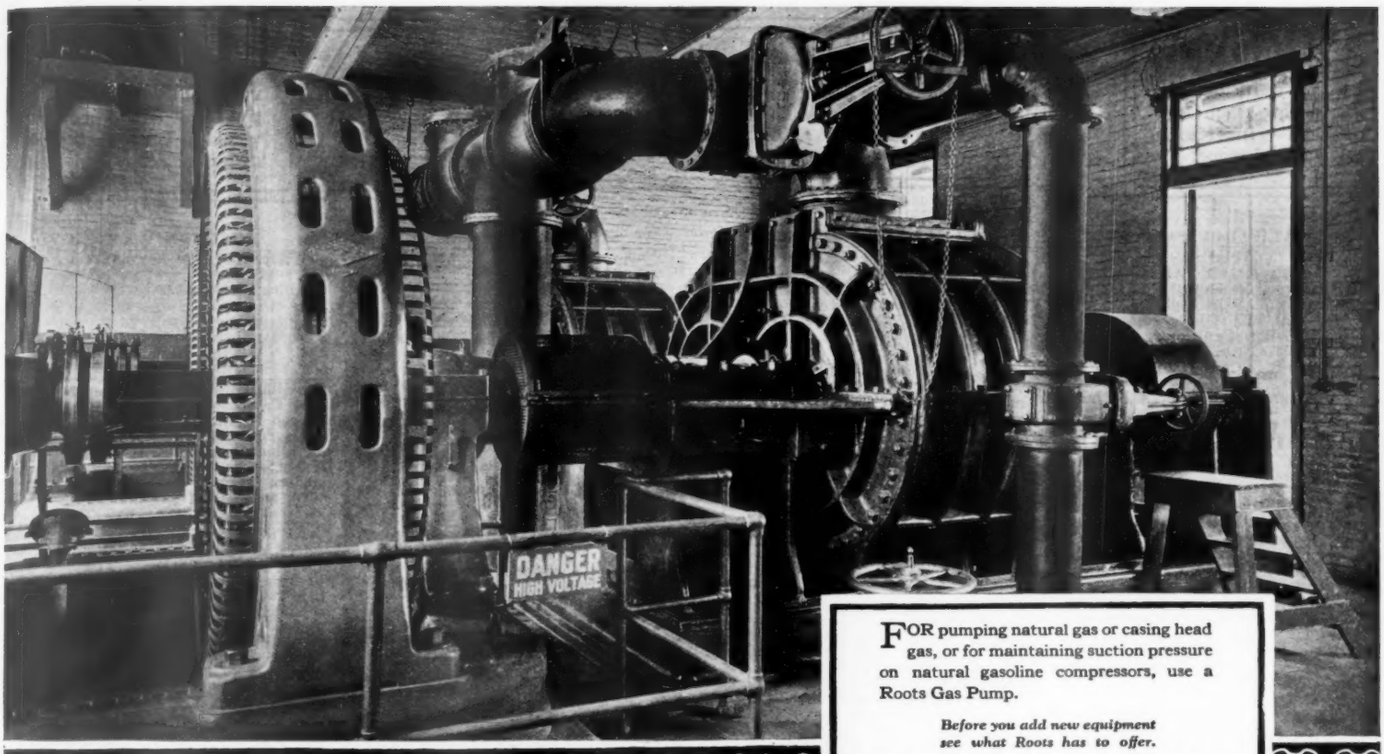
W. C. Feazel is drilling No. 1 Hemler, Section 20-16-6, at 1,895 feet; No. 2 Hemler, Section 6-15-6, set 12½-inch casing at 199 feet and is drilling at 300 feet. Gulf Refining Co. is rigging up to drill No. 1 Millsaps, Section 8-17-6, and cemented 8⅝-inch casing at 2,300 feet in No. 2 Wayne Lumber Co., Section 23-16-5e. Moody & Seagraves' No. 1 McClanahan, Section 36-16-5e, is drilling at 2,200 feet; No. 2 McCoy, Section 30-16-6, is fishing for drill stem at 2,200 feet; No. 1 Noble, Section 36-16-5, began drilling November 12, and set 15½-inch surface string at 146 feet; No. 1 Osborn, Section 14-15-5, began drilling November 12, and has made 150 feet.

Natural Gas & Fuel Corp.'s No. 1-A Sartor, Section 9-16-6, is drilling at 600 feet; No. 2-B Sartor, Section 19-16-6, is drilling at 690 feet. Oliver and others have been pumping mud into No. 1 R. E. Hatch, Section 2-15-5, during the past four weeks in a so far vain effort to kill a flow of 5,000,000 feet of gas and 10,000 bbls. of salt water at 2,318 feet. Roxana Petroleum Corp.'s No. 2 Tensas Delta Land Co., Section 1-14-5, is drilling sandy shale at 1,750 feet. Southern Carbon Co.'s No. 1 Sartor, Section 20-18-8, began drilling November 13, and is down 115 feet. Standard Drilling Co.'s No. 1 Delta Hardwood Co., Section 22-16-7, is drilling shale at 2,660 feet. Stovall Drilling Co.'s No. 1 Dunning, Section 26-16-6, began drilling November 14. Woodley Petroleum Co. and Triangle Drilling Co. have cemented 6⅝-inch casing at 2,467 feet in No. 1 Hemler, Section 31-18-7, to test 5 feet of sand, total depth 2,478 feet.

Sabine Parish

Pleasant Hill—Arkansas Fuel Oil Co. is drilling No. 11 Logan, Section 33-10-12, at 2,560 feet, and No. 1-A Logan, Section 32-10-12, is drilling through col-

(Continued on Page 127)



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The new No. 14 Star Blowers operate efficiently at high speed—15% greater capacity than No. 4 Steam Jet Blowers—are completely assembled on metal bases—easily moved and placed close to forge—economical in fuel consumption—dependable air cooled motor—easily started by rope pull starter. Low pressure natural gas can be used by installing Star Natural Gas Valve. Blower fan on electric unit directly connected to motor shaft. Both gasoline and electric type have an extension shaft for emery wheel or other contrivance. For sale by leading supply houses.

Write for prices.

STAR DRILLING MACHINE CO.
Akron, Ohio

Branches: Chanute, Kans.; Wichita Falls, Texas; Long Beach, Calif.; Portland, Ore.
Export Office: 2 Rector St., New York City, U. S. A.

35 CENTS a line first insertion; 25c a line each additional insertion. Cash in advance.

CLASSIFIED WANTS

CREATE AND BUILD BUSINESS

MAIL your advertisement now. It will be published next week. Cash with order.

FOR SALE—EQUIPMENT

AIR COMPRESSORS

30-ft., 49-ft., and 69-ft. Steam Drive.
355-ft. Ingersoll-Rand F.R.I. Steam D.
442-ft. Sullivan, WJ3 Belted.

AGITATORS

1—New 300-Bbl. Cap. 15 ft. dia., 27 ft. high.
1 Fine 250-Bbl. Cap., 12 ft. dia., 26 ft., 6 in. high.
Both lead lined and equipped ladders, walkways and fittings.

BOILERS

6—Erie 150-HP HRT 150-lb. Pressure.
3—Freeman 150-HP Scotch Marine 145-lb. pressure.
2—Erie 200-HP. Scotch Marine 150-lb. pressure.
3—500 and 2—468 HP Sterling water tubes.

CONDENSER BOXES

2—10 ft. wide 40 ft long 8 ft. deep.
3—30 ft. wide, 30 ft. long 8 ft. deep.
2—10 ft. wide 40 ft. long 8 ft. deep.
All equipped with 10 ft. compartments. Steel supports 12 ft. high.

HEAT EXCHANGERS

1—6 ft. x 25 ft. Heat Exchanger, has 4,000 ft. 4 in. pipe.

OIL ENGINES

3—25 HP Fairbanks-Morse Type.
1—50 HP 1—75 HP 1—100 HP and 1—150 HP FMY's.
Can furnish generators to suit.

DUPLEX STEAM PUMPS

6 Gardner 7x5½x6, 4 in. suc. 3 in. dis.
4 Gardner 6x5¾x6, 4 in. suc. 3 in. dis.
1 Dean 10x7x10, 6 in. suc. 4 in. dis.

STEEL TANKS

6—55,000 bbl. cap., 1—25,000 bbl. cap.
1—15,000 bbl. cap., 1—4,400 bbl. cap.
30 others from 250 to 4,000 bbl. cap.
10 scrubber and pressure tanks.

STEEL CAR TANKS

100—8,000 Gallon Capacity.
40—6,500 Gallon Capacity.
All cleaned painted and tested.

STEEL STILLS

3—11 ft. x 40 ft., 1—14 ft. x 35 ft.
4—10 ft. x 30 ft., 1—8 ft. x 25 ft.
All complete with steel supports.

STEEL TOWERS

25—5 ft. dia. x 25 ft. high.
10—5 ft. dia. x 20 ft. high.
All steel supports for same.

MISCELLANEOUS

1,000 valves 1 in. to 10 in.
Screwed and flanged type. Many are new.
95 Reid Class Peep Boxes.
10 Foamite 40 gal. Fire Wagon.

HYMAN-MICHAELS CO.
Peoples Gas Bldg., Chicago, Ill.
Railway Exchange Bldg., St. Louis, Mo.

IDLE AND PORTABLE Southwestern condensers, exchangers, absorbers, fractionators and complete gasoline plants priced to move. W. F. Pyne, 909 So. Ardmore Ave., Los Angeles, Calif.

FOR SALE—Air cleaning outfit practically new; proven very efficient by big companies. Save two-thirds clean out expense. Price one-half list. Sedwick Oil Co., 529 Kennedy Bldg., Tulsa.

FOR SALE—Reclamation plant, for recovery of used motor oil, capacity 600 gallons per day; new plant; guaranteed cost of production, 12 cents per gallon, for a good marketable lubricating oil that will retail at filling stations for $1.00 per gallon. Reason for selling, joint owners cannot agree. Address 2531 East Independence, Tulsa, Oklahoma; Telephone 3-2459.

TWO 85 H.P. Twin Cylinder Watt Miller Direct Connected Vacuum Pumps. Vacuum cylinders 18"x20".
ROTH GASOLINE CORP.
Independence, Kans.

FOUR STAR MACHINES with or without boilers and tools. 1 No. 25; 1 No. 26; 1 No. 28; 1 No. 30. J. E. Galligan, Skelly Oil Co., Tulsa, Okla.

FOR SALE—Electric power plant complete 110 horsepower gas engine, 2,300 volt generator, $2,000, McMillon, Shamrock, Okla.

FOR SALE
One Keystone Well Drilling Machine, complete with all necessary tools and parts. Apply G. C. Pool, Armour & Company, Purchasing Department, U. S. Yards, Chicago, for details and price.

FOR SALE—EQUIPMENT

FOR SALE—A-1 good as new 3,200-ft. 6-in. National upset drill pipe with Johnson tool joints on doubles. Acme Pipe & Supply Co., Corsicana, Texas.

FOR SALE—Little used, equal to new for work, Armstrong 25 special Kerosene Tractor drilling machine. Has the patented derrick to use steel drill line and with it tools with bits starts 16 down to 6 inch hole. Immediate delivery. Address Box C-125, The Oil and Gas Journal, Tulsa, Okla.

USED LINE PIPE AND CASING FOR SALE
7—25-Hp. used gas engines.
10—6-in. standard rigs.

15,000 ft. 5⅜-in. used casing.
15,000 ft. 6⅝-in. used casing.
10,000 ft. 8¼-in. used casing.
5,000 ft. 10-in. used casing.

75,000 ft. 3-in. used line pipe.
50,000 ft. 4-in. used line pipe.
20,000 ft. 6-in. used line pipe.
For immediate shipment from our Texas yards.
KEYSTONE PIPE & SUPPLY CO.
607 Holmes Bldg.,
Fort Worth, Tex.

FOR SALE — 36 star Gas Tractor Drilling machine in good paint and A No. 1 mechanical condition. Has the latest "F L" improved clutch on band wheel shaft. Been used but little on shallow water well drilling, swing light tools. Address Box C-126, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—EQUIPMENT
5 Dean Triplex Pumps, 5 by 8.
1 No. 2, 1 No. 5, 1 No. 6, 2 No. 7, 1 No. 10, 1 No. 11, 1 No. 12 Sweetland Oil Filters.
Two 10-inch S. Roturbo Centrifugal Pumps. Six 10-inch S. Centrifugal Pumps. Steam Turbine.
Storage Tanks. Send for list.
Send us your inquiries.
We buy your surplus equipment.
CONSOLIDATED PRODUCTS CO
15 Park Row. N. Y. C. Barclay 0603

FOR SALE — Armstrong 19 special walking Beam type, Kerosene Tractor Drilling machine. First class condition offered with or without tools. Early December delivery. Priced to sell. Address Box C-127, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—GASOLINE PLANT
Equipment and storage tanks.
Address CGH, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—One reversible clutch for 25 H. P. Reid Engine. Inola Oil Co., 529 Kennedy Bldg., Tulsa, Okla.

FOR SALE — 5½ Keystone Steam Tractor Driller with combined friction and gear hoist. Good condition ready for work. Boiler recently reflued. Address Box C-128, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—We have approximately 12 miles of 8-inch second hand oil line pipe in excellent condition with good threads and couplings, located in the state of Wyoming. For further particulars write.
OHIO IRON & SUPPLY CO.,
Lima, Ohio.

FOR SALE—Air compressors. Curtis 15⅝x2, Rix 2½x3. Particularly suitable for tire shop, filling station or gas testing machine. P. O. Box 578, Tulsa, Okla.

FOR SALE
Complete Standard drilling Rig. New Marion Rig Irons, new Boiler new drilling lines, drilling tools and fishing tools, everything needed to drill deep. Located in Western Kansas. Bargain for cash. Address Box C-11, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE — Practically new Armstrong 50 walking Beam and calf reel type all steel tractor drilling machine, powered with four cylinder Buda motor. For further information address Box C-124, The Oil and Gas Journal, Tulsa, Okla.

HELP WANTED

SALESMAN

High grade, with experience selling power plant specialties. Acquaintance with executives or buyers in industrial field necessary. Every inudstrial and public institution, hotel, office building, every building and structure are prospects. The entire line are proven producers and backed by a Surety Bond, guaranteeing satisfaction. A permanent, profitable position with 100% co-operation. Thorough training given, exclusive territory. Write complete details. Replies confidential.

THE NORTH AMERICAN FIBRE PRODUCTS CO.
Cleveland, Ohio

FOREIGN WORK. Men interested in oil, mine, railway work, etc., in South America, write at once. South American Service Bureau, 14,600 Alma, Detroit, Mich.

District or State Representatives
Large established manufacturer of quick selling line of hot and cold insulating material, used by leading factories, power plants, refineries, refrigerating plants, etc., has exceptional openings for district or State representatives in South, Southeast and Southwest, particularly Atlanta, Birmingham, New Orleans, Memphis ,Nashville, Tulsa, and San Antonio. Either individual or sales organization. Must be well acquainted with leading firms in territory and have demonstrated ability as sales agent. Our representatives earning as high as $2,500 monthly. A real, high grade, permanent, earning opportunity. State qualifications fully.
GENERAL INSULATING & MFG. CO., Alexandria, Indiana.

SUPERINTENDENT WANTED for new oil refinery. Applicant must be financially able to purchase interest in company now held by present superintendent. About $5,000 required. Box C-116, The Oil and Gas Journal, Tulsa, Okla.

WANTED ASSISTANT SALES MANAGER
One of the oldest manufacturers in Connecticut is considering applications for Assistant Division Sales Manager for their expanding sales organization.
He must be not over thirty-five and preferably under thirty years of age.
Preference will be given a graduate mechanical engineer who is experienced in the sale of belting. He must be experienced in specifying proper belts for various power transmission and conveyor belt installations, in determining amount of horse power a belt will transmit at various speeds on different installations, in specifying proper pulley diameters and speeds for best results on new installations, etc. A man with merchandizing experience will be given preference.
He must be capable of appointing and training salesmen.
This position requires a man to travel regularly, and he must be willing to accept a nominal salary at start with a real future if he proves to be a producer.
If you can qualify, write giving details of your age, education, experience, record of past employment and salary desired, to Box C-121, The Oil and Gas Journal, Tulsa, Okla.

SALESMAN WANTED who can handle line of pumps in connection with his other lines. Address Box 1744, Tulsa.

OIL INDUSTRY PRINTING

CONSUMERS' LEDGERS
We are prepared to furnish from stock standard forms of gas meter Consumers' Ledgers. Sample forms and quotations on request. First-class material and workmanship.
DERRICK PUBLISHING CO.
Oil City, Pa.

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township books, well records, etc. Request on your letterhead gets free catalog. Olds Press. 215 East Third St., Tulsa, Okla.

POSITION WANTED

WAREHOUSEMAN, 26, married, six years experience as field warehouseman handling all supplies except refining, desires connection in west or midwest. Master of Spanish; will go to any Latin American country under suitable conditions. Address Box C-117, The Oil and Gas Journal, Tulsa, Okla.

SUPERINTENDENT—College graduate. Familiar with construction and operation of complete plants with all types of modern equipment on paraffin and naphthine base crudes. Can organize efficient operating organization and install modern system of refinery accounting. Will go anywhere. Address Box C-75, The Oil and Gas Journal, Tulsa, Okla.

AUTOMOBILE—General cost man—Age 31, experienced in assembling and applying cost data in a way that leads to logical conclusions. At present with national fleet owner. Executive ability, capable of handling volume, want to be associated with reliable firm in Southwest to be nearer to my folks in the Panhandle. Can furnish first class references. Box C-120, The Oil and Gas Journal, Tulsa, Okla.

PETROLEUM And MECHANICAL Engineer. Seven years field experience, scouting core study air and gas lift production, gas plant, design and operation. Salary $300 anywhere. Box C-112, The Oil and Gas Journal, Tulsa, Okla.

SUCCESSFUL sub-surface geologist, now employed, 6 years experience Mid-Continent field, desires position; part of full time. Box C-115, The Oil and Gas Journal, Tulsa, Okla.

EQUIPMENT WANTED

WANTED
All or part of 70,000 ft. 6 inch gas line, threaded or plain ends, must be good condition second hand. When replying state amount, condition point of shipment, lowest price, immediate delivery. Address MINERALS RECOVERY CORP., 804 Grand Ave., Kansas City, Mo.

ADDRESSES WANTED

WANTED the address of Roy Watkins driller. Worked at Desdemona and Mirando City, Tex., and later at Webb City, Okla. Between 35 and 40 years old. Box C-110, The Oil and Gas Journal, Tulsa, Okla.

REAL ESTATE

ATTENTION
TOWN-SITE COMPANIES
I own 365 acres partially in and overlooking the town of Jacksonville, the new oil town in Cherokee County, Texas. Ideal for subdivision, electric high line now being constructed through property with sub-station location. Gas line within ¼ mile. Priced to sell. F. E. Churchill, Jacksonville, Tex.

WHERE FLOWERS BLOOM in Winter. Last semi-tropical, sub-division tracts of South Texas now being offered. Exceptional opportunity. Time and tide waits for no man. Write Chas. Stalling, Clyde, Tex.

FOR SALE — 17 acres called "THE SPILLWAY," the most beautiful spot adjacent to Kansas City for a country home. Dam, water wheel, bridges, four acres tillable, wooded and wonderful springs. Twelve miles from city. All paved roads. Electric lights. Kansas City Machine Works, 1305 West Eighth St., Kansas City, Mo.

PATENT ATTORNEYS

REGISTERED PATENT ATTORNEYS
United States and Canada
Before disclosing your invention to anyone, send for blank form,
Evidence of Conception.
Bulletin "How to Establish Your Rights" and complete information free.
LANCASTER & ALLWINE
240 Ouray Bldg., Washington, D. C.

PATENTS—Oil well cases a specialty. Reliable services by an experienced practitioner devoting personal attention to each case. References to oil well clients in Tulsa. B. P. Fishburne, Patent Lawyer, 550 McGill Bldg., Washington, D. C.

35 CENTS a line first insertion; 25c a line each additional insertion. Cash in advance.

CLASSIFIED WANTS

CREATE AND BUILD BUSINESS

MAIL your advertisement now. It will be published next week. Cash with order.

LEASES—PRODUCTION

NEW MEXICO oil leases; Lea, Eddy, Chaves, Union, Quay and all other active counties; complete list and map on request. Orcutt-Harris & Co., Colcord Bldg., Oklahoma City, Okla.

OIL LEASES and royalties. Ector, Crane, Pecos, Reeves, Ward, Upton and Winkler Counties; buy or sell. C. H. C. Anderson, 712 Linz Bldg., Dallas, Tex.

FOLLOW THE FOLD

Fee, Leases and Royalties for sale near major company drilling well in Brewster County. Extensive development in prospect. We will block up drilling contracts or secure special tracts at usual commission charge. Brewster Leasing & Development Co., Alpine, Tex.

SOUTHWEST TEXAS — WINKLER, Loving, Reeves, Ward, Pecos, Culbertson Counties.

Drilling blocks, Leases. Royalties.
Ranches in fee.
H. F. Anthony, Pecos, Tex.

LEASES, Royalties and drilling blocks bought for you. Special land lease and geological service anywhere in West Texas to operators and those interested in this territory, rendered at reasonable fees. We have every facility to serve you. World Oil Co., Land Department, Fort Worth, Tex.

NEW MEXICO—Leases in Lea and Roosevelt; cheap royalties in Roosevelt and Guadalupe; leases in any county; information regarding New Mexico developments. William U. Tate, Franciscan Hotel, Albuquerque, N. M.

FOR SALE

Oil-lease in shallow field in Kentucky 53 acres with small production, price right, also have 80-acre lease now being equipped and showing two barrels per day.

Have another lease 11 years old pumping 12 barrels per day, will sell these separate or all together. Box No. 94, Scottsville, Ky.

FOR SALE. Lease 55-acre tract and 124-acre tract in major company block, $2.50 per acre, 50 cents renewals. 10,000-acre block solid, $1.50 per acre. Box 103, Quitman, Tex.

FOR SALE, 20, 30, and 40-acre tracts close into a deep test now being drilled in Oklahoma's best gas field, east of Poteau, Leflore County. This land is leased, but has not been drilled. $10 per acre, warranty deed and abstract furnished. Jasper N. Butler, Poteau, Okla.

FOR SALE at ten dollars per acre, bonus oil and gas mining lease on 240 acres in shallow production field of Washington County offset wells to drill. Norman Barker, Bartlesville, Okla.

FOR SALE—About 56,000 acres in one of the largest oil producing counties in Texas, all under fence and highly improved and almost all fine agricultural land. Geologists have reported favorably with regard to oil, gas and coal. This is an unusual good buy and won't be long on the market. Price $8 per acre in fee simple, one-third down and balance at 8 per cent; or can be leased for oil and gas for five years at $1 per acre bonus plus 50 cents per acre per annum rent, net to owner. The outright buy at $8 which includes all subsoil rights, is the better proposition, I think. L. Wueste, P. O. Box 183, Eagle Pass, Texas.

GRADY COUNTY, OKLAHOMA

Underlaid with many Oil and Gas pools like Seminole area but at shallow depth and cheap drilling cost. WE HAVE 800 acre block in central producing area on structure, $2 per acre and well; also best leases and royalties, attractive prices. Highest reference furnished.

COMMERCE DEVELOPMENT CO.
First National Bank Bldg.,
Chickasha, Okla.

WRITE FOR PRICES on leases, royalties, and farm lands on Sweetgrass Arch.
KEVIN-SUNBURST HOLDING CORP.
Box 313, Shelby, Mont.

HAVE SOLID BLOCK choice acreage on promising Montana structure. Drilling starting now close by. Want financial help. Box C-123, The Oil and Gas Journal, Tulsa, Okla.

LEASES—PRODUCTION

"IN THE TREND"

Southeastern New Mexico and West Texas counties — Lea, Eddy, Chaves, Gaines, Andrews, Winkler, Loving, Ward, Culberson and Pecos Counties, oil and gas leases, royalties and drilling blocks. We buy and sell. F. S. Blackmar. P. O. Box 541, Roswell, N. Mex.

HAVE GOOD Custer, Washita and Caddo County oil leases for sale from $1.50 to $6. Right on the structures where the companies want them, also drilling blocks. Write me where you want your leases and I will make you a good price. J. J. Sallaska, Corn, Okla.

UNUSUAL OPPORTUNITY; have block 10,000 acres; Eastern Kansas; 30 miles Kansas City. Geology and three correlated 2,500 ft. encircling wells show large enclosed sub-sturcture 350 to 400 ft. in height and two oil saturated horizons of more than 100 ft. in thickness each. More than 500 oil and gas wells 225 to 500 ft. in depth encircle the district. Considered a large gas proposition. Both oil and gas pipe lines across the block. Want drilling offer. Dr. E. E. Paddock, Kansas City, Mo.

A REPUTABLE GEOLOGIST, thoroughly knowing the structures of two Southern States, who has been successful in making locations, has two or three gas structures within approximately 25 miles of fair sized cities, and wants to correspond with reputable people with a view to drilling. The gas, as produced, sold at the well to reputable people. A number of wells drilled to a shallow depth have shown gas, some probably in paying quantities, oil sands not yet reached, but looks quite favorable. Cable Tool territory. Box 836, Cisco, Texas.

FOR SALE or lease lands of Fullers Earth, Lignite, Coal, Slate, Chinaware Glaze, Clays, Alum, Bentonite, Sulphur and Oil indications. Need help on good proposition Pumice and Potash Polisher and cleaner. First quality. Cleans anything no scratch, smooth finish. Write or see A. H. Becker, Carmine, Tex.

U. S. GEOL. SURVEY report shows my oil leases cover lands considered favorable for oil and gas. 900 acres my leases on Anticlinal Structure already worked out. 320 acres directly in center of government permit on said Anticline. Priced very reasonable. Low rentals. W. M. Breuer, 2004 Carlton St., Ft. Worth, Tex.

FOR SALE—Half section considered proven for good Glenn production, should prove valuable property when developed, some old settled production now on lease. Proves several other producing sand possibilities; will sell outright or give interest for development. Address P. O. Box 3444, Tulsa, Okla.

LEA COUNTY, NEW MEXICO
LEASES
State lands well located. Write for description and price.
LOS ANGELES-NEW MEXICO OIL CO.
114 S. Los Angeles St., Los Angeles, Cal.

LEASES for sale near 596 ft. hole. 200 ft. were lead. 276 ft. zinc. Owner. Wayne Hotel, Tulsa, Okla.

OFFER 10-year lease 200 acres 10-6n-3w, McClain County, Okla., at $3. Joe P. Crawford, fee owner, Oklahoma City, Okla.

LEASES, royalties and drilling blocks bought or sold, West Texas. Wire or write Cope and Fox. 411 San Angelo Nat'l Bank Bldg., San Angelo, Texas.

FOR SALE—Leases, Oil Production, Asphalt, Lime Stone and Other Mineral Lands. W. P. Harley, Bowling Green, Ky.

WINKLER—PECOS COUNTIES
Leases and Royalties
W. S. PATTERSON
Pecos, Texas

INCORPORATIONS

DELAWARE incorporators. Charters fees small, forms. Charles G. Guyer, 901 Market St., Wilmington, Del.

CHARTERS—Delaware best, quickest, cheapest, most liberal. Fee forms. Colonial Charter Co., Wilmington, Del.

ROYALTIES—PRODUCTION

WINKLER COUNTY, Texas, royalties. Tracts for the small as well as the large investor. $1 an acre up. Send for list and map. James R. Haynes, Grantville, Kans.

WEST TEXAS ROYALTIES
FOR SALE
Of prime consideration is the geological work accompanying each sale.
J. F. MARION OIL COMPANY
1213 Magnolia Bldg., Dallas, Texas.

NOTICE

Offering undeveloped and producing royalties, leases and drilling blocks, Brown (Fry Field area), Coleman, Callahan and Shackelford Counties, Texas.

All offerings submitted will be accompanied by geological information.
M. ELDER & COMPANY
Coleman Hotel Bldg., Coleman, Tex.

ONE ACRE of oil royalty in Pottawatomie County, Oklahoma, for $30. Might be worth $5,000. Box 8, Tecumseh, Okla.

BUYING WEST TEXAS and New Mexico royalties direct from owners in large and small tracts require outlet for some excellent bargains. McAnally & Company, Box 1127, Abilene, Texas.

WANTED—To buy around one hundred barrel production Okla., Kas. or Texas. Give full particulars. Box C-113, The Oil and Gas Journal, Tulsa, Okla.

WEST TEXAS

FEE—LEASES—ROYALTIES
Wholesale—Retail
I have a very interesting Pecos County block of perpetual royalty—large or small tracts.
J. S. JONES
First Nat'l Bank Bldg.,
Ft. Stockton, Tex.

FOR SALE—Owner retiring, desires to sell interest old settled production only partly developed, a dozen proven locations. Box 523, Okmulgee, Okla.

CAN FURNISH ½ perpetual participating royalties with or without 10-year lease, Western Oklahoma Counties $1.50 and up. Joe P. Crawford, Petroleum Bldg. Oklahoma City, Okla.

ROYALTIES

West Texas royalties—Winkler, Ector, Pecos, Yoakum, Gaines, Andrews, Brewster, Presidio, Jeff Davis, Hudspeth, Val Verde, Terrell counties. Available in units of $25 and up. Write for list. Mid-West Lease & Royalty Corp., P. O. Box 488, Fort Worth, Tex.

QUICK ACTION ROYALTY

1/32nd of 1/8 of royalty on 160-acre offset to Deep Rock well now drilling, Block A-46, Andrews Co., Tex., warranty deed, recorded in your name, $40. Mid-West Lease & Royalty Corp., Box 488, Fort Worth, Tex.

WANTED—Producing royalties, 1 to 50 bbls. State price per barrel interest you own, and legal description. P. O. Box 196, Wichita, Kans.

DEED ROYALTIES — Get in on ground floor in La County, N. Mex. Ten acres up to a section or more. Wire or write BLUE QUAIL ROYALTY ASSOCIATION, Box 383, Odessa, Tex.

160 ACRES N. W. Sec. 4 Twp. 19. What royalty would you give for ½ or a 40. Sarah Wilber, Marshall, Okla.

FOR SALE. Unusual opportunity, to get in on ground floor, shallow production, six miles 4 and 5 inch line supplying domestic and commercial gas. Almost unlimited possibilities in sale and production. Seven new wells, northeastern Kansas. Drill rig on ground, plenty of acreage. Price $20,000. Reason sickness. C. K. Smith, 806 Rialto Bldg., Kansas City, Mo.

GEOLOGISTS

WHY SPEND vast sums for expensive Geophysical tests on the Coastal Plane of Texas and Louisiana before you know whether the evidence compiled by a competent engineer of 26 years experience would warrant such an expenditure?

Gulf Coast petroleum surveys and researches, explorations, appraisals and reports. Richard B. Thacker, 1302 Hyde Park Blvd., Houston, Texas.

BUSINESS OPPORTUNITY

CAPITAL—An experienced, dependable broker with following will aid in financing a worth while project. Address B. W. 810 Broad St., Newark, N. J.

FOR SALE—Boiler and tank repair shop located in center of oil and gas field, in town of 8,000; this will bear investigation. For further information write, Westerman Bros., Bremen, Ohio.

WILL PAY CASH

For gas situations having income $100,000 or more.
P. J. MINCK,
720 So. Kenosha Avenue, Tulsa, Okla.

MR. WILDCATTER

Do you need money to finish or go below contract depth? We may be able to assist you, write stating location and depth of well, kind of rig, amount of acreage, condition of hole, contract depth and all other information possible. Send geological map and report if you have one. Box C-33, The Oil and Gas Journal, Tulsa, Okla.

PARTNER WANTED with $5,000 or $10,000. Prefer partner who can give time to business and who has had experience using heavy tractors and Athey wagons for moving oil-field supplies, handling ditching and dirt-moving jobs, skidding rigs, and general oil field contracting. No boozeheads need apply. Excellent money-making opportunity for right man. Write or telegraph Alex Bradford, The Tractor Man, P. O. Box 153, McCamey, Tex.

I WANT connecrion with responsible firm or individual buyer who can give quick answer on producing or undeveloped royalties. Drawer R, Seminole, Okla.

STOCKHOLDERS' MAILING LISTS FOR SALE—We have the stockholders names in over 1,000 oil, mining and other companies. Answer this. Will send itemized price list showing each one and price. No charge. A. F. Williams, Manager, Dept. T, 166 W. Adams, Chicago, Ill.

FOR SALE

Established distributing supply business, earnings increasing yearly, corporate capital small, owners retiring from business. Address Box C-130, The Oil and Gas Journal, Tulsa, Okla.

BROKERS ATTENTION

We can make you a good proposition to drill one or a series of wells in one of the best shallow oil fields in Texas. Have drill, pipe and leases or will drill yours. Ray Smith, Box 40, Fry, Tex.

FOREIGN WORK

THE LARGE OIL COMPANIES ARE NOW SHIPPING MEN TO FOREIGN FIELDS. Send $2 immediately for booklet concerning over 600 companies their location and pictures of operations. Describes living conditions, salaries and etc. Foreign Service Company, Cotton Exchange Bldg., Fort Worth, Tex.

BROKER SALESMAN — Underwrite mutual stock issue, producing oil properties, justify payments large dividends, appraisal assets $239,000. Competent engineers planning on drilling 1,000 ft. shallow wells on Pecos River, Texas, where in vicinity Yates Pool 6,000 bbls. daily sales used for expansion purposes. Box C-131, The Oil and Gas Journal, Tulsa, Okla.

MANUFACTURING MACHINISTS

MACHINE WORK — CASTINGS
Machined to your drawings. Gears, Machinery designed and built.
Modern Facilities—Prompt Service.
Reasonable prisce. Send for our booklet.
GENERAL ENGINEERING AND MFG. CO., ST. LOUIS, MO.

CRAGO CUT GEARS

Worthy of your confidence. General machine work. 1416 Walnut, Kansas City, Mo. Phone Harrison 7660.

ADDITIONAL CLASSIFIED WANTS ON PAGE 127

Chicago Spot Market Reported Quiet

Gasoline Demand Light, Prices Steady. Distillate Demand Fair. Outlook for Slow Motor Fuel Demand During Week

By J. B. Waldo

CHICAGO, Nov. 21.—The local spot market was quiet today. The gasoline demand was noticeably light, sales being unimportant, although prices were steady at recent quotations. Some U. S. Motor gasoline was moved at 6¼ cents but the bulk of the business went at one-eighth less and some at 6 cents which was the low price to the trade. Kerosene was a little more firmly held owing to reports of further export buying.

The demand for distillates and gas oils for furnace fuels was fair with prices firm, and the same was true of the low cold test fuel oils. For the heavy fuel oils with a cold test of 30 degrees or higher the demand was light and prices easy in tone, but the industrial buyers were not active in the market on Monday. Quite a few jobbers were in the market, some of them in regard to contracts for the coming season and others to get posted on conditions, but they were not buying except for immediate needs.

Salesmen who are coming in on account of the Thanksgiving holiday report that gasoline stocks are generally small but that the dealers are not willing to buy although they do not look for lower prices. The outlook for the week as regards gasoline is for a slow demand at present prices. The buying of gas oils and distillates was so large last week that the present week will probably be less active, a condition that will not be improved by the fact that the weather turned warm on Sunday and rain fell instead of snow.

Furnace Oil Demand

The weather man was good to the oil fraternity of this city last week. His promises were even better than his performances as he predicted much more severe weather than we actually had. But the predictions of "much colder" which with the weather man means a drop of 10 to 15 degrees in temperature, was understood as a forecast of zero weather and the users of domestic oil burners acted accordingly. The result was a great improvement in the distribution of furnace oils and considerable replacement by the distributors. The largest movement was in the zero gas oils which are quite generally adopted as the best oil fuel for the larger installations as well as by many burners in the smaller sized dwellings. The zero fuel oils were also in demand and not freely offered but the heavy fuel oils while moving fairly well, were where the cold test was low rather easy in tone but stronger for the higher cold tests. Kerosene was not active and could be bought a little lower in price at the close of last week. Distillates were active and firm.

Holding for 6¼ Cents

Gasoline moved slowly in the spot market. The bulk of the business was on contracts and as the spot price is now just about in line with the contract price there was no incentive for the dealer to place a part of his order in the spot market, thereby reducing the cost of his stock of gasoline. Another reason why the jobber is giving his present business almost exclusively to his contract refiner is that takings have not been heavy during the month and the dealer is placing all the business he has to give at present with his refiner in order to complete his monthly quota. There has been the usual demand for transit cars as the dealers who order in the spot market are only doing so when they are practically at the bottom of their tanks. Several of the larger refiners are still holding for a 6¼-cent price for U. S. Motor gasoline and selling a few cars daily to their regular trade. At lease two have advanced their price from 6⅛ to 6¼ cents but in each case, the cause for this has been heavy shipments to their own stations but this activity is not general for several of those who are holding for 6¼ cents state they are storing gasoline at their plant or plants as they have determined not to sell at less than 6¼ cents at least for the present. Near-by refiners are still taking advantage of the differential rates and some prices have been made in differential territory that are very low by comparison with Group 3 prices delivered at these points. A Cincinnati oil company in excusing itself for not ordering from a friendly source of supply stated it had a quotation from a perfectly responsible refiner of a trifle more than 8½ cents delivered at Cincinnati. Another refiner was quoting 7⅛ cents from the Mississippi River for delivery in Ohio only and a third quotation was 6 cents Group 3 for delivery to Michigan points out of the Chicago district. Of course these refiners have to bring their crude long distances to their plant but it is pipe line transportation and cheap compared with the freight on the refined product. The new freight costs which go into effect on January 2, 1928, give the refiners east of the Mississippi River an additional advantage as the new tariffs increase the rate on gasoline from 36 to 38½ cents per 100 pounds, that is, if the I. C. C. is not induced once again to make a change in its rulings regarding the petroleum rates from Group 3 points to this district.

Price Steady

The price for U. S. Motor gasoline f.o.b. Group 3, was quite steady all of last week, the prevailing price to dealers being 6 to 6⅛ cents with several refiners as previously stated holding for 6¼ cents although some who quoted that price might, to do business, accept a little lower price. The initial order for 125 cars over November placed by the new Wolverine Petroleum Co., which is doing collective buying for several southern Michigan oil companies, went at 5¾ cents to a refining organization with a local plant from which shipments could be made. The demand for the higher gravities last week was fairly good, better by comparison than for the U. S. Motor grade, but the prices simply held their own for the week, closing just where they started. There were some in the market who thought the tone was a little stronger, others that it was not quite so strong at the close as at the beginning of the week, but the difference was slight, if any. There is less talk regarding the antiknock gasolines but refiners with established brands state they are selling just as well as ever and they anticipate a larger business with the coming season for these products. There are so many new brands on the market, every refiner of any importance having at least one and some of the marketing companies their own special brew, that the competition between them for dealers who will sign an exclusive agent is more active and there bids fair to the considerable shifting of accounts from one refiner to another, although a dealer should be slow to change when the product he has been pushing to his trade is giving satisfaction. There was no change in natural gasoline. One of the largest local refining organizations had an inquiry out for 10 to 15 cars of grades B, BB or C for immediate delivery but generally the demand was not active nor prices changed.

Kerosene Easy

Kerosene was rather easy in tone although there was some export buying. The domestic demand as evidenced by orders received in their market was lighter than for several preceding weeks. Some 41-43 gravity oil was available at 4½ cents to the trade and a little at 4⅜ cents for resale although this price was not general. The fact that any kerosene of this grade was to be had at such prices was accepted as an indication that refiners had caught up with deliveries and wanted more business and that stocks were increasing in the field as has been generally stated here. Some refiners were still holding for 4¾ cents but little business was done at this figure. The demand for the 42-44 gravity was light at prices ranging around 5 cents.

Distillates in Demand

Distillates were favored by the colder weather and the demand was considerable. Much of the business consisted in the receipt of shipping instructions on contracts. One refiner stated that during the past two weeks he had received shipping orders for practically all of his accumulations. He did not expect the demand would continue at the same high level as many of his dealer customers would be sufficiently stocked for a time when they received the cars ordered out but he did look for a steady demand from now on. Some of the local distributors have been in the market but they wanted more gas oil than distillates. Another large refiner stated his October business in distillates was better than during the present month but he explained they had been after their trade pretty hard during October for deliveries and additional orders and had filled up the customers' tanks to a great extent so they would have no room for more material of this kind until they had worked off part of their present stocks. Prices were firmly held and full quotations asked with an occasional advance in price noted but the range continued of 3¼ to 3⅜ for the 38-40 straw distillate with an occasional seller asking 3½ cents usually for a high grade product. The 36-38 gravity was held at 3⅛ to 3¼ cents as a rule much depending on the flash and color.

Gas Oil of Zero Grade

Gas oil of the zero grade was in demand all of last week and the business done in some quarters was unexpectedly large. One leading source of supply reported they were doing a very large business and receiving orders from unexpected sources. One near-by refining organization operating cracking stills placed an order for 10,000 bbls. of straightrun gas oil with a local refinery. The demand for the cracked zero gas oil extends from a 32-36 down through all gravities to a 26-28 and 28-30 gravity and there is some difficulty experienced in securing the lower gravities with a sufficient low cold test. The only product available in quantities is a blended product. The demand from the gas companies was light and confined to the smaller concerns. The larger companies are just beginning to draw on their stocks according to their buyers. A large refiner seeking an outlet for some U. G. I. gas oil stated he found that every one of the larger gas companies was either carrying stocks or had contracts for their needs and not in the market at present. Most of these concerns were supplied with stocks purchased at 2¼ to 2⅜ cents and, even if they would consider buying, it was only at an equally low price. The industrial demand is just fair, although some of the local distributors state they are having a large run of business from manufacturing concerns. Generally, with the exception of the larger gas companies, the demand is more active for all grades of gas oil with the zero leading. Price changes are not numerous although a few advances have been named but the present prices are firmly held with an upward tendency on the zero oils. The only refiner that is known to be buying gas oils is The Texas Company, which bought a couple of hundred cars out of Oklahoma oil at a price stated to be 2½ cents and of course may have placed other orders but the largest part of the present demand comes from the distributors of fuel and furnace oils.

Fuel Oil Flurry

The colder weather and snow of the latter part of last week caused quite a flurry in the local fuel oil market with some marking up of prices by concerns that secured a considerable portion of the business from the distributors. The result was quite generally to cause a return of quotations to the price list that has generally quoted but which has been badly cut through the offerings of oils that were sometimes deficient in some respect, at low prices. There has been a very large volume moved here of an oil that is rated as 23-26 gravity but which actually has tested a little higher than 24 gravity, which has a zero pour test and a flash of 235 degrees all of which are good but the sulphur content is not so good being 1½ per cent. This oil has been freely sold at 75 cents and some at 72½ cents. This oil was a bargain for the buyer who was not so particular as to the sulphur content. If the percentage of sulphur had been as low as "less than one-half to 1 per cent," it would have sold for at least 80 cents and probably much of it would have brought 85 cents. This oil is from a refinery located in differential territory which also gives them an advantage. The refinery advanced its price to 80 cents for this grade and naturally the quotation of the low sulphur, low cold test oil would advance with it to possibly 87½ cents.

But generally the market was slow to respond as too much oil was being offered by refiners out of Group 3.

Lubricants

The demand for lubricating oils is not large and yet it might be worse, according to several refiners and compounders. What they are complaining of is the way prices are being cut. A well versed lubricating oil man showed a sample of bright stock that he said should not be sold for less than 28 cents which was actually offered at 23 cents.

Tank Wagon Scale

There has been no general change in the tank wagon scale over this territory. Some claim the tank wagon scale is being changed daily and this is true for there are frequently some local changes being made. Some are restorations of prices that are below normal and others are reductions and some claim the number of places where the price has been cut is not increasing but if this is true there are still a great number where the price is openly below the scale and many others where the prices at which gasoline is sold are below the quoted price. One station in a suburb of this city makes a price 3 cents below the station price for gasoline used for business. All a buyer has to do is to whisper to the attendant that he uses the car for business and the price is made 15 cents instead of 18 cents. Every car is used for some business purpose. Even driving to a bridge game is strictly business. And everybody in the business believes every story of cut prices and instead of finding out first if the tale is true, make a retaliatory cut and the first man who was said to have cut but did not now has to cut and the wonder is that so many stay in the business and pay their bills, sometimes.

West Texas Crude Lowers Bunker Oil

But Gasoline Situation in Eastern Market Improves. Little Change in the General Situation

By N. O. Fanning
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NEW YORK, Nov. 19.—Improvement in gasoline and weakness in bunker fuel oil were the principal developments in the refined oil situation on the Atlantic Coast during the past week. While the changes registered in prices of these products were small, they were regarded as indicating the new trend of the market as a result of lower Seminole output and larger West Texas shipments to refineries.

Very little change has been recorded in the general situation here. Nothing occurred during the week to indicate a major movement in prices. Optimism was somewhat more general, but this is considered as due to the psychological factor of the coming of a new year. The oil industry has the habit of looking forward to new years with hope. This year is no exception.

The industrial situation in the East is extremely spotty. Manufacturing activity is high in some lines and stagnant in others. Salesmen handling lubricating oils for industrial use find themselves forced to seek out markets and exercise themselves to the limit to maintain a normal increase in sales. If they do this, however, they invariably report progress.

Oil companies handling a large volume of business, well diversified, are more or less satisfied with present conditions, provided they do not get any worse, for they feel that if given time, lower costs will go a long way toward offsetting present prices.

The oil export situation here is unchanged. Business has fallen off somewhat, but a rush is anticipated before the end of the year in fulfillment of 1927 contracts. Conditions in the export trade are considered satisfactory, in view of the uncertainty the industry has been through.

Gasoline Higher

The refinery market for gasoline on the Atlantic Coast has improved substantially during the week. The Atlantic Refining Co. advanced its price for U. S. Motor gasoline in tank car lots from 8 to 8½ cents a gallon at Philadelphia. Most other refiners have withdrawn all 8 and 8⅛-cent Navy gasoline and are willing to sell at not less than 8¼. It is considered entirely possible that all factors will ultimately establish the 8½-cent level in the near future.

There seems to be somewhat less distress gasoline in the eastern market at present than for two or three months. But factors in the market are observing caution in the matter of prices because they believe there is still too much gasoline on hand and that higher quotations will only serve to bring it out and encourage greater production. Some advance might be expected if for no other reason that prices are out of line with production costs, but no extended advance is looked for.

The gasoline situation at coastal cities has improved because of the dearth of distress cargoes and this has been reflected in a much more steady and uniform tank wagon market. In New York City, for instance, gasoline is retailing widely at 20 cents a gallon, and there are fewer cut-rate establishments now than a month ago.

However, retail price cutting is still prevalent in some of the inland cities, and there are no indications it will stop for a while.

Kerosene

The kerosene market is steady. Some factors who had fully expected to see kerosene advance to the level of gasoline do not believe this possible now. Gasoline is tending upward and kerosene is no more than holding its recent gains. Furthermore, the tank wagon market for kerosene has not responded to the increase in refinery prices.

This is regarded as significant of the fact that the strength in kerosene during recent weeks has not been directly due to an increase in tank wagon sales. It is believed outside factors have had more to do with the kerosene price situation than the demand for kerosene as such. For instance, increased sales of furnace oil, and the heavy demand for Diesel oil and gas oil have taken from the kerosene fractions in the refining of crude oil, and have reduced the supply of kerosene available as such.

Certainly the tank wagon market for kerosene does not tend upward and in Baltimore is as low as 10 cents a gallon, a price unprofitable to those handling it. The Baltimore situation has been regarded as due to competition, but the price has been low for so long it is almost a fixture. It is probably due in some measure to the fact that a leading Baltimore refiner has a low-priced crude contract which does not expire until the end of this year.

Gas and Fuel Oil

The gas oil market is firm. It seems that both gas oil and Diesel oil are sharing the same strength apart from bunker fuel oil "C," which is weak. While Diesel oil is classed in many respects as a fuel oil, this product and gas oil, because of more extended use, are swayed to a lesser degree by the course of the bunker oil market than ever before.

During the steady downward move in bunker oil prices in recent weeks, gas oil and Diesel oil have held relatively steady. Gas oil is selling at 5½ cents in tank cars, f.o.b. refinery at Atlantic Coast points, as against a high of 6 to 6¼ cents this year. Diesel oil, at the present price of $2.10, is selling at 30 cents below the peak price of the year of $2.40 a barrel, or a drop of 12 per cent.

Bunker fuel oil, on the other hand, is down to $1.40 a barrel at New York harbor against a high of $1.75, a decline of 35 cents, or 20 per cent. Bunker fuel oil was reduced this week 5 cents a barrel at Atlantic Coast ports to $1.45 at New York, Baltimore, Philadelphia and Norfolk and to $1.35 at Charleston, S. C. This reduction was due to the arrival of West Texas crude on the market in substantial quantities. It was generally anticipated, and it would not be surprising to the trade if a further drop of 5 or 10 cents were to come in the near future. It is believed, however, bunker oil is getting down to rock bottom.

Lubricating Oils

The lubricating oil market is spotty. Motor oils are in good demand and are firm. Industrial lubricants are on the whole somewhat slow. In some lines the point of stagnation has almost been reached. The New England floods had a more far-reaching effect in some districts than had been thought at first, especially in tieing up the movement of goods by rail.

Prices of lubricating oils are on the whole unchanged. This is largely an indication of a sound trade position despite the current dullness in some directions.

Paraffin Wax

Paraffin wax sold lower during the past week. Offerings of refined 130-132 and 135-137 were more plentiful and these grades dropped one-quarter of a cent a pound, now being quoted at 4¾ and 5½ cents, respectively. Refined wax of 125-127 was also cut one-quarter of a cent to 4 cents, while 120-122 dropped one-eighth of a cent to 4 cents.

Petrolatum

A spirited demand for petrolatums developed during the week, much of the buying being for export. Snow white jumped one-half cent to a new high price for the year of 9 cents a pound, in barrels, for carload lots. Lily white sold as high as 7¾ cents a pound, a gain of one-quarter cent, while cream showed a similar gain, advancing to 6¼ cents. Dark green, amber and extra amber were unchanged but in good demand. Refiners seemed to be better supplied with the latter grades.

Principal Exports

The following table shows principal exports of petroleum and petro'eum products from New York during the past three weeks (all figures in gallons unless otherwise noted):

	Nov. 16	Nov. 9	Nov. 2
Gasoline:			
Bulk	.....	.....	2,785,095
Cases	335,400	336,900	3,352,500
Kerosene:			
Bulk	.....	.....	3,100,000
Cases	552,760	449,930	3,282,500
Lubricating oil:			
Barrels	899,200	337,250	697,150
Cases	52,190	74,140	55,550
Lubricating grease:			
Barrels (lbs.)	.....	.....	561,600
Paraffin wax:			
Bags (lbs.)	979,000	356,400	609,620
Barrels (lbs.)	190,000	483,075	1,812,125
Petroleum asphalt:			
Barrels (tons)	.....	2,623	237

The foregoing figures include all shipments of 500 bbls., 1,000 cases, or more.

The following table shows estimated daily average receipts of crude and refined oil by water at Atlantic Coast ports for the past three weeks; also monthly record for the last 12 months (figures in barrels):

	Week ended—		
	Nov. 16	Nov. 9	Nov. 2
Gulf Coast	215,000	382,000	364,000
Pacific Coast	45,000	107,000	56,000
Mexico	41,000	61,000	38,000
South America	114,000	102,000	104,000
Total	415,000	652,000	562,000

Daily Averages by Months

1927—	Gulf	Pacific	Mexico	S.A.	Total
Oct.	314,000	98,000	38,000	91,000	541,000
Sept.	336,000	97,000	69,000	99,000	601,000
Aug.	397,000	90,000	80,000	78,000	645,000
July	406,000	83,000	78,000	49,000	616,000
June	378,000	118,000	68,000	47,000	611,000
May	332,000	58,000	91,000	53,000	534,000
April	388,000	93,000	69,000	61,000	611,000
Mar.	345,000	103,000	36,000	81,000	565,000
Feb.	379,000	89,000	40,000	48,000	556,000
Jan.	362,000	73,000	49,000	61,000	545,000
1926—					
Dec.	363,000	57,000	49,000	61,000	530,000
Nov.	335,000	62,000	56,000	40,000	493,000

The foregoing figures are based on the carrying capacity of incoming oil-laden tankers.

Export Market

The oil export market at New York during the past two weeks has not given a very good account of itself, but this is believed to be a temporary lull. Year-end shipments are usually heavy as a result of the filling out of yearly contracts. Exports for the remainder of the year, therefore, should be substantial.

Fuel oil has been the most interesting product of crude oil from the viewpoint of the foreign market in recent months. A fuel oil war has been waging in almost every part of the world since last March. Prices have been cut again and again. This situation is attributed partly to friction between leading foreign marketing organizations, but it is probably due more to overproduction.

California began to ship more fuel oil to the Far East beginning in March, and shipments were also made on an increased scale to other parts of the world, including the Atlantic seaboard of the United States. Following this came Venezuela with its increasing production. Contracts were made between European marketers and producers in Venezuela for the delivery of many millions of barrels of fuel oil at prices below those prevailing up to that time.

West Texas is the last source of production to have a depressing effect on the fuel oil markets. It has not reached Europe yet, but lower prices along the Gulf and Atlantic seaboards of the United States, put into effect the past two weeks, will, it is believed, be followed by reductions in other parts of the world. This seems assured further by the enormous potentialitis of the West Texas fields.

It is an interesting fact regarding the oil export situation that production outside of the United States has probably increased as rapidly as consumption during the past year, with the result that the demand for American petroleum products has probably not increased in proportion to the gain in demand. This does not refer to products exported from the United States refined from imported crude. The United States has not probably increased its exports of domestic oil products to anywhere near the extent indicated by the gain in all oil shipments from this country. Many coastal refineries in the United Statees use 10 per cent to 25 per cent imported crude in their operations, and the exported products have the same proportion of foreign oil. The percentage of imported crude going into products for export is steadily increasing. The gain in domestic demand for oil products is taking an increasing percentage of the output from American oil fields.

CALIFORNIA RECEIPTS AND PETROLEUM IMPORTS

Imports of crude and refined oils at principal United States ports for the week ended November 12 totaled 1,503,000 bbls., a daily average of 214,714 bbls., compared with 1,454,000 bbls., a daily average of 207,714 bbls. for the week ended November 5 and a daily average of 206,357 bbls. for the four weeks ended November 12, as follows:

At Atlantic Coast Ports—	
Baltimore	307,000
Boston	.....
New York	670,000
Philadelphia	129,000
Others	133,000
Total	1,239,000
Daily average	177,000
At Gulf Coast Ports—	
Galveston district	40,000
New Orleans and Baton Rouge	174,000
Port Arthur and Sabine district	.....
Tampa	50,000
Total	264,000
Daily average	37,714
At All United States Ports—	
Total	1,503,000
Daily average	214,714
Daily average four weeks ended	206,357

Receipts of California crude and refined oil at Atlantic and Gulf Coast ports for the week ended November 2 totaled 670,000 bbls., a daily average of 95,714 bbls., against 634,000 bbls., a daily average of 90,571 bbls. for the week ended November 5 and a daily average of 99,357 bbls. for the four weeks ended November 12, as follows:

At Atlantic Coast Ports—	
Baltimore	283,000
Boston	85,000
New York	.....
Philadelphia	302,000
Others	.....
Total	670,000
Daily average	95,714
At Gulf Coast Ports—	
Daily average	.....
Total Atlantic and Gulf Coast Ports	670,000
Daily average	95,714
Daily average four weeks ended	99,357

Distribution of total California receipts is as follows:

Crude	273,000
Gasoline	327,000
Gas oil	.....
Fuel oil	70,000
Total	670,000

Fire Prevention in Gasoline Plants

Accidents Declared to Be Pure Waste. Human Failures Mostly Responsible. Contrast With Refining

By George F. Prussing*
Chairman, Petroleum Section, National Safety Council.

There is something very suggestive about the title of this paper—"Safety and Fire Prevention in Gasoline Plants"—and perhaps nowhere in the oil industry does it so accurately hit the mark. Especially when viewing the short history of the natural gasoline industry in California is the fact borne in upon one that in that industry safety is fire prevention. Read the keen analysis of fatal accidents in the California Petroleum Industry made each year by H. C. Miller of the United States Bureau of Mines and you will discover that the refining of crude oil has become so safe that during 1926 there were no fatal accidents that were pertinent to the actual refining of oil. This marked control over a really hazardous business is made even more striking when the fatalities at natural gasoline plants are reviewed. Not only is the ratio of deaths to men employed exceedingly high but in almost every case the cause of these deaths has been fire.

Safety in any branch of the oil business starts with the study of experience, goes next through a phase of engineering revision and ends in the education of personnel in safe practices. Perhaps "ends" is the wrong word, for the education of personnel never ends, if it is to be successful. We cannot, however, undertake either engineering revision or education until we know what is causing our accidents, how serious these are and how much they are costing us and our men. The first step is therefore the very prosaic one of getting prompt, accurate account of every accident that requires first aid or medical care or that causes a man to lose time from his regular duties. The simplest means to that end is to insist that the provisions of the Industrial Accident Commission are strictly complied with, for in the State of California such accidents as I have defined must be reported. Have these reports made somebody's business, so that they are properly made out, promptly sent to headquarters and there analyzed and called to the attention of the man in charge of operations.

Inadequate Reports

Every accident that so disables a man that he must leave his work, either for medical care or because he is incapacitated, should be investigated by someone to get at first causes. Of all the silly fiction with which this age is cursed, the worst is by all means the usual accident report. "Burned face while lighting boiler," says the report. "Few days," for estimated disability. An honest investigation reveals the following facts: The gas burner had no pilot light. The plant operator had hired a fireman on the latter's statement that he knew all about firing boilers, having rough-necked on a drilling rig. Having pinched the fire down to nearly nothing, a gust of wind had struck the unprotected setting and had blown out the flame. With one hand on gas valve the fireman had peered in to see if the fire had really gone out or was merely hiding out somewhere in the firebox. The explosion which burned his face also wrecked the boiler setting. Even the "few days" estimate of disability proved to be an optimist's dream, lengthening into 12 weeks, costing the man the use of one eye and his company a medical and compensation bill of nearly $4,000! There we have a picture of a plant needing engineering revision along definite lines, an organization in need of overhauling, especially in the hiring and training of men and discipline in the enforcement of the most elementary items of safe operation.

Sheer Waste

Interest is the moving force of success and to create interest we appeal to each man in the language he best understands. Selfishness is an unkind term and so we call it enlightened self-interest, when we tell the management that certain items in the budget are for the purpose of preventing accidents. For accidents are pure waste, costly in man power, in material, in good hard cash paid out for doctors' bills and unnecessary suffering. Having therefore set up the machinery for getting to the man in charge of operations each day the real story of how accidents occur, it is no more difficult to get the funds to cure them than it is to overcome any other error in operating technique. If our management is frequently enough hit in the eye with the cold fact that practically all gas plant accidents are preventable, the word will soon go down the line that accidents must stop. What can we truthfully say as to the cost of accidents? Just this, that there is no single item of waste in modern industry in which the cost is so high. Whether we pay the toll to an insurance company or absorb it as part of the operating expense, even the direct money cost of caring for the injured is a tremendous burden. Consider this other fact, no less true though seldom mentioned. For every dollar spent for compensation and medical care of the accidentally injured, not less than $4 are spent in incidental costs. The wrecked boiler setting, the training of a new man, the lost time of fellow workmen, the added supervision of foremen, the upset of morale, these are items which can all be translated into dollars drawn from the profit side of our operations and to what end? When pounding sand down the proverbial rathole is classed among gainful occupations, then and not till then can management afford to become complacent about the money cost of industrial accidents.

Accidents Outlawed

In this connection it may not be amiss to mention that management has already seen this point. Not in every company, it is true, but in the larger, more far-sighted organizations and also in certain departments such as your own, headed by clear-thinking technical men, accidents have been outlawed as evidence of bad business. We see that fact constantly in the statistics reported to the National Safety Council and to the United States Bureau of Mines. Miller shows a constant decline in the fatal accidents among the drilling and producing personnel of the California companies. In 1922 there were 24 fatalities for every 100,000,000 bbls. produced; in 1926, the figure was but 11. Had the 1922 rate prevailed during 1923, 1924, 1925 and 1926, 131 men would have lost their lives who now are living. Translate that number of lives into dollars by whatever formula we will, it represents the profit due to safety. I have seen many of the results of fatal accidents in this business of ours but no poor devil laid out in death nor heartbroken widow and fatherless children have ever been so eloquent as is this picture of these 131 men that safety pays and that management knows and cares.

Selling Safety

If I have presumed to suggest that you sell safety to your management by showing them the real cause of accidents, you must pardon it as something of an obsession that has come from hard and painful experience and the observation of others who have been far more successful in their efforts. Only from management can come the dollars that make possible the use of proper materials, the costly guards about machinery, the even more costly time for planning plant design properly instead of gambling. The head of the most successful contracting firm in this city told us that its profit comes from painstaking planning of every operation on paper. I know that in the gas industry changes in operating technique must first pass the bright boys with the sharp pencils, the slip sticks and the calculating machines. Just so, the real true cost of chance taking can be tried out and weighed for the benefit of those who hold the purse strings. You can tell your people to a split mill what will be the dollars and cents profit of an added intercooler, an extra stage of compression and the return of gas down a five spot. But have you ever figured the cost of a broken cast iron fitting under a pressure storage tank with your boilers only a hundred feet away? Have you assured yourself that nowhere, with the break of a fitting, will that flood of gaseous dynamite find the spark to turn it into a hell of fire? Not until you have made as sure as engineering skill permits that your plants are proof against a fortuitous union of fuel and fire, can you justify your positions as the custodians of lives and property.

Human Failure

It may well be said that review of the accident records of our industry show but a small proportion due to mechanical failure. And true it is that perhaps 20 per cent of the number are mechanical and 80 per cent human in their ultimate cause. It is this very fact, however, that throws the emphasis on guarding the mechanism. When the man fails the unguarded machine takes its toll. My first experience in accident investigation taught me why machinery must be guarded. A temporary pumping plant had been built in a tank farm. A rotary pump was driven by a large horizontal gas engine set on wooden bolsters, with pits dug for the flywheels. The plant was housed in a rough lumber shack. The plant ran day and night, attended by three men whose principal occupations were oiling the engine and trying to sleep in spite of the bark of the exhaust. On the day of the accident, the pumper coming on tour tripped on the threshold and dived headon into the unguarded flywheel of the gas engine.

Had there been a toe board about the flywheel pit, that man might have saved himself. The marks on the ground showed how hard he had tried to regain his balance, during that instant that death stared him in the face. Had there been only a rail, he might have grasped it. But there was nothing—just a temporary plant—not worth spending money on. Yet I am sure that engine had a governor, an oiling system and a fuel supply. The man who installed it—and I mean the superintendent, not the mechanic—had judged the importance of these parts correctly enough but he measured human safety in terms of the machine, not the men who ran it.

Oilers Without Wings

The safest criterion for judging how well to guard machinery is good horse sense. Remembering that machinery accidents, if few, are always serious, the guard that prevents contact with moving parts is always best. The normal operations that a man must perform can usually be done more efficiently when the chance of being caught has been removed. Even oiling devices can be rearranged to make them accessible. The average engine designer thinks that the man who oils has wings and flits from oil cup to oil cup over flywheels, cranks and cams. Automobile designers once had a similar notion, though what bird or insect could find the clutch throwout yoke grease cup on one car, I know not. The errors and omissions of designers are legion. Try to buy a machine that complies with the law. I know one manufacturer who writes his own specifications for machinery and includes his own ideas on safeguards, handy oiling devices and adjusting mechanism. We can not all go so far, but we need not operate a machine until it is right, legally and safely guarded.

We read of the terrible disaster in Pittsburgh. I can see you all skimming as I did through the graphic news accounts, seeking the few lines of technical explanation that would make the cause of the explosion clear.

I have read and seen applied some of the rules which you men enforce before you permit a man to enter even the smallest tank or other space where flammable vapors might accumulate. Let me quote from such a set of rules:

"No repair work involving fire or spark producing tools shall be undertaken in any tank or other space subject to gas accumulation until said tank or space shall have been freed of all oil and gas and a certificate to that effect shall have been obtained from a competent chemist.

"No such work shall be undertaken until all lines leading to such tank or space shall have been disconnected or slip blanked. An electrical bond shall be made about each point where a line is to be broken."

If that seems far fetched, remember what happened under the dock at Wilmington a year ago. The ordinary routine steps were taken to free a line of gas before welding was done in a confined space but the one step that might have saved half a dozen men from disaster was omitted. No one apparently made sure that these ordinary precautions had been successful before the torch was applied. They gambled and lost.

In a recent refinery fire some valuable lessons were learned about our fire fighting technique. Briefly, we learned that fighting one mean fire is worth a hundred of the usual perfunctory fire drills. We have as a result for four months been experimenting with a new idea, new at least to us. We have been holding in our refineries and at our gas plants what we call problem fire drills. Their purpose is threefold. We hope to be able to teach our men how to prevent fires by making them fight imaginary fires that might happen anywhere through carelessness or mechanical failure. We hope to make them think out what they would do under such circumstances now under the friendly if critical eyes of their superiors, rather than waiting for a time when thought might be impossible. But even more important, we hope to habituate them to go calmly through the technique that some day may save their lives.

Example of Problem Fire Drill

Problem—A gasket on top of one of the absorbers blew out and an explosion followed with the entire absorption plant in flames. The absorption plant operator was badly burned.

Execution—The fireman blew the fire whistle and met the compressor plant operator at the fire house. They put the absorption plant operator in the fireman's machine after rendering first aid. The fireman then left with the operator for the emergency hospital. The compressor plant operator then shut the compressor plant down and shut the gas off from the field. He then went to the Rose No. 3 boiler plant and shut it down, closing the main steam header. From here he went to the main boiler plant and shut it down, also closing the main steam header valves. He then went to the office and breaking in telephoned the operator, who in turn notified the foreman. As soon as help arrived he attached the fire hose to protect the boiler house and used the 40-gallon Foamite to protect the compressor plant.

Results—Due to the valve arrangement

*Before California Natural Gasoline Association.

on the gas lines to and from the absorption plant, in case of a major fire in the absorption plant it could not be by-passed and a complete shut down of the field would be necessary. It also shows that with only three operators on duty at night in case of a fire of this kind all men should be familiar with the operation of the other units.

Already we can say that in a large measure these hopes are being realized. The men are learning the emergency handling of operating equipment as well as fire equipment. They are taking an interest that speaks well for the security of the plants they operate.

NORTH LA.-ARK.

(Continued from Page 120)

lapsed casing at 2,100 feet, total depth 4,258 feet. Magnolia Petroleum Co.'s No. 2 Rembert, Section 32-10-12, is drilling lime at 3,172 feet. Moffatt and others cemented 6⅝-inch casing at 3,205 feet in No. 3 Moore, Section 5-9-12.

Webster Parish

Cotton Valley—Humble Oil & Refining Co. began drilling No. 5 J. Babb, Section 14-21-10, November 10, set 15½-inch casing at 458 feet for a Trinity sand test; No. 1 Gray, Section 26-21-10, another deep test, is drilling at 2,662 feet. It was a 15,000,000-foot gas well at 2,545 feet on first completion Febrlary 7, 1925. Magnolia Petroleum Co.'s No. 1 G. W. Cole, Section 27-21-10, is repairing rig, shut down at 2,725 feet; No. 3 Cox, Section 23-21-10, is shut down waiting orders, estimated good for 3,000,000 feet of gas at 4,588 feet. Ohio Oil Co. is waiting for cement to set after setting 6⅝-inch casing at 4,250 feet in No. 4 Holloway, Section 23-21-10.

Sarepta, Shongaloo and Spring Hill—Arkansas Natural Gas Co. has made a deal with North Central Texas Oil Co. involving the latter's lease in Section 36-23-10, and has derrick up for its first test in north Webster, No. 1 North Central Texas, 660 north and 660 feet east SW cor. SW NE. of the section. Magnolia Petroleum Co.'s No. 1 Haynesville Mercantile Co., Section 1-22-10, is in chalk rock at 1,990 feet; No. 1 Newsom, Section 32-23-9, is drilling at 1,155 feet; No. 1 Roseberry, Section 29-23-9, is a derrick and No. 1 Wise, Section 30-23-9, is bailing casing at 2,706 feet. Northwest Louisiana Gas Co.'s No. 1 Munn, Section 29-23-9, is a location.

ARKANSAS

Nevada County—Humble Oil & Refining Co. began drilling No. 4-B Groves, Section 1-14-21, November 9, set 10-inch casing at 38 feet and has drilled down and set 6-inch at 1,136 feet. J. J. O'Brien's No. 17-A Moss, Section 1-14-21, is shut down waiting orders after rigging up.

Ouachita County

Smackover—Humble Oil & Refining Co. has gone back to No. 4 Murphy, Section 3-16-15, a 400-bbl. producer at 2,378 feet July 22, 1925, and is arranging to deepen to the Blossom sand at 2,600-2,700 feet. Phillips Petroleum Co. cemented 6-inch casing at 2,693 feet in No. 19 Joyce, Section 33-15-15, total depth 2,696 feet.

Union County

Champagnolle—Garrett-Modisett Drilling Co. is arranging to set 6⅝-inch casing at 2,675 feet to test 2 feet of sand in No. 1 Gregory, Section 10-17-14, following an oil show developed by Johnson test, total depth 2,770 feet. E. M. Jones' No. 1 Crain, Section 2-17-14, cored 2 feet of sand, 3,060-62 feet, that showed oil and is arranging to set 6⅝-inch casing at 3,054 feet to test. Ohio Oil Co.'s No. 3 Crain, Section 1-17-14, is drilling at 1,770 feet; No. 5 began drilling November 14, and No. 6 is a new location with derrick up, 263 feet south and 186 feet east NW cor. SW SW, Section 1-17-14; No. 1 Pumphrey, in the same section, is drilling at 2,475 feet.

Smackover—Magna Petroleum Co.'s No. 6 Tatum, Section 7-16-15, plugged back to 2,400 feet after a salt water test at 2,704 feet with 4½-inch casing cemented at 2,698 feet, and is waiting for cement to set. Magnolia Petroleum Co.'s No. 7 Wilson, Section 17-16-15, is drilling at 2,280 feet. C. E. Murdock has cemented 4½-inch casing at 2,764 feet for a second test of No. 2 Murphy, Section 12-16-15, which was a 200-bbl. well at 2,500 feet when completed by J. Marr, June 12, 1925. Standard Oil Co. is reaming to set 4½-inch casing at 2,590 feet for a second test of No. 24 H. Murphy, Section 4-16-15, completed June 2, 1925, as a 700-bbl. well at 2,386 feet.

EAST TEXAS

Harrison County

Magnolia Petroleum Co. is bailing to test No. 1 Will Anderson, J. Womack Survey, at 2,402 feet. State Line Oil & Gas Co.'s No. 5 C. M. Abney, E. Little Survey, at 2,360 feet.

Panola County

Magnolia Petroleum Co.'s No. 2 Sarah Davenport, Jessie Dunlop Survey, is reaming, total depth 2,390 feet; No. 1 Lila Fletcher, B. C. Jordan Survey, is coring at 1,897 feet; No. 2 C. G. Steele, on the same survey, is rigging up to drill; No. 1 J. M. Trosper, James Shadoin Survey, is cementing bottom to cut off salt water tested at 1,978 feet.

SOUTHWEST TEXAS

(Continued from Page 52)

north and 1,470 feet to east lines, has sand at 3,003 feet.

Cole Gas Field No. 2

Cole Petroleum Co.'s No. 36 Benavides, Survey 14, Block 412, located 159 feet to east line and 266 feet to north line, is drilling at 5,400 feet.

Ed Mims and Sam Evans' No. 1 Hinnant, Survey 10, Block 16, (block changed) at 150 feet to southeast and southwest lines, is drilling at 1,400 feet. O. W. Killam's No. 1 Lopez, Survey 75, Block 16, located 200 feet to south line and 700 feet to east line, is moving on.

Luling Field—Caldwell

Magnolia Petroleum Co.'s No. 19 Rios, J. Henry Survey, NE cor., is drilling at 2,100 feet. North & South's No. 1 Kelly is drilling at 7,230 feet in schist; No. 2 Tiller is also drilling in schist at 6,780 feet.

Dale Field

The Texas Company's No. 4 Lackey, Nich Kelly Survey, 545 feet southeast of No. 1, is drilling at 2,275 feet in chalk with little oil; No. 4 Clingensmith, Squire Damon Survey, 545 feet to southeast and 150 feet to southwest lines, at 2,341 feet, has 150 feet of oil in the hole and is bailing; No. 7 Clingensmith, Squire Damon Survey, 150 feet to SE cor., is drilling at 1,200 feet; No. 2 Lackey, Nich Kelly Survey, has derrick up; No. 3 Beatty, Nich Kelly Survey, has derrick up.

Kingsville Field—Kleberg

Houston Oil Co.'s No. 3 Kissman, Section 41, Block 10, at 500 feet to north and west lines, has derrick up. Humble Oil & Refining Co.'s No. 2 Sexauer, Section 41, Block 11, located 200 feet to south and 100 feet to east lines, is drilling at 3,660 feet.

Adams Gas Field—Medina

Pioneer Oil & Refining Co.'s No. 1 Adams, Survey 13, Block 1, at 300 feet to south and east lines, is rigging up. Southern Gas Utilities' No. 3 Schmidt, Survey 71, located 1,447 feet to west and 1,340 feet to south line, is drilling at 161 feet. Mid-Kansas Oil & Gas Co.'s No. 2 Nixon, Survey 13¾, located 597 feet to north and south lines and 500 feet to east lines, has set and cemented gas and is ready to drill in. Witherspoon Oil Co.'s No. 6 Nixon, Survey 119, at 2,750 feet to north line, has set surface casing at 105 feet and resumed drilling.

Refugio Field—Refugio

Coast Gas Co.'s No. 2 Shelly, producing well from shallower sand, is being rigged up to deepen to the new 3,300-foot sand. Houston Oil Co.'s No. 2-A Rooke is drilling at 2,600 feet. Houston Gulf Gas Co.'s No. 3 Heard, is drilling.

POSSIBILITIES IN PECOS COUNTY PRODUCTION

(Continued from Page 33)

covery you feel the well performances to date have indicated. The product of these two factors may range from 150,000,000 to 250,000,000 bbls.

Pipe line capacity remains at 44,000 bbls. daily for the remainder of this month, although the Gulf Pipe Line Co. completed its 8-inch line from the Gulf Production Co.'s Yates lease to a loading rack at McCamey and began running oil through it last Saturday. So far as known, this line will be used strictly for Gulf oil and will not be available for other companies. The pipe line proration plan will not be affected, however, as the Gulf will probably develop its properties no faster than the other concerns and will hold down its production to the level which would have been allotted to it.

Estimate 448,464 Bbls. Daily

The semimonthly calculations for pipe line proration purposes show a total of 448,464 bbls. daily estimated production as of November 15. Only 18 of the 56 producing wells were actually gauged this time, the others being figured in at their October 31 capacity. Several of the wells shown on the report are probably incapable of producing now as much, even in one hour, as they did then. This is particularly true of some edge wells. On the other hand, several were gauged while they were drilling in and are now capable of making several times as much. For instance, Humble Oil & Refining Co.'s No. 3 Smith gauged 27 bbls. an hour and is now doing 333 bbls. hourly. Likewise, Gulf Production Co.'s No. 3 Yates, which is flowing 60 bbls. hour, was not gauged at all.

These gauges are taken every month on all wells, and every 15 days on new wells, for a definite and worthy purpose which is the equitable division of the field's meager pipe line capacity. That capacity is now 44,000 bbls. daily, exclusive of the Gulf's line, and approximately 60,000 bbls. daily including the latter. When the Illinois Pipe Line Co. adds some new booster stations to its 8-inch which now delivers oil to a tank farm at Del Rio, the capacity will be increased another 12,000 bbls. or so. But there is no prospect of any increase in pipe line capacity commensurate with the potentialities of the field this winter.

The Yates Pool could hardly be expected to maintain a flow of 448,464 bbls. daily from 56 wells but it is believed it is capable of actually producing at least 150,000 bbls. daily now and could probably be increased to 200,000 bbls. or more by intensive drilling. It is to prevent just such a condition that the producers in the field have abided by the proration scheme which is keeping the oil stored underground rather than in steel tankage.

Company and Lease:	1 Hr. Gauge	24 Hrs.	Pro-rata
Mid-Kansas:			
Yates No. 1-A	131	.....	.....
Yates No. 2-A	881	.....	.....
Yates No. 3-A	97	.....	.....
Yates No. 4-A	211	.....	.....
Yates No. 5-A	159	.....	.....
Yates No. 6-A	1,039	.....	.....
Yates No. 7-A	1,167	.....	.....
Total	3,685	88,440	8,132
Yates No. 1-B	826	.....	.....
Yates No. 2-B	221	.....	.....
Yates No. 3-B	634	.....	.....
Yates No. 4-B	171	.....	.....
Yates No. 5-B	*157	.....	.....
Yates No. 6-B	*241	.....	.....
Yates No. 9-B	*55	.....	.....
Total	2,305	55,320	5,202
Yates No. 1-C	217	.....	.....
Yates No. 2-C	*2,725	.....	.....
Yates No. 3-C	*45	.....	.....
Total	2,987	71,688	6,735
Yates No. 1-D	*537	12,888	1,211
Smith-Taylor No. 1	150	.....	.....
Smith-Taylor No. 2	*123	.....	.....
Smith-Taylor No. 3	*261	.....	.....
Total	534	12,816	1,207
Total Mid-Kansas	10,048	241,152	22,487
Marland:			
Yates No. 1-A	128	.....	.....
Yates No. 2-A	*446	.....	.....
Yates No. 3-A	*70	.....	.....
Yates No. 4-A	*190	.....	.....
Total	834	20,016	1,885
Gulf Production Co.:			
Smith No. 1	86	2,064	196
Thompson No. 1	91	.....	.....
Thompson No. 2	18	.....	.....
Total	109	2,616	249
Total Gulf Prod. Co.	195	4,680	445
The California Co.:			
Yates No. 1	627	.....	.....
Yates No. 3	1,041	.....	.....
Yates No. 4	132	.....	.....
Yates No. 5	963	.....	.....
Total	2,763	66,312	6,232
Smith No. 1	403	.....	.....
Smith No. 2	132	.....	.....
Smith No. 3	*151	.....	.....
Total	686	16,464	1,550
Total Calif. Co.	3,449	82,776	7,782
Simms Oil Co.:			
Smith No. 1	132	.....	.....
Smith No. 2	1,032	.....	.....
Total	1,164	27,936	2,624
McMan Oil & Gas Co.:			
Yates No. 1	290	.....	.....
Yates No. 2	547	.....	.....
Yates No. 3	107	.....	.....
Yates No. 4	106	.....	.....
Yates No. 5	183	.....	.....
Yates No. 6	151	.....	.....
Yates No. 7	*626	.....	.....
Yates No. 8	*6	.....	.....
Yates No. 9	*14	.....	.....
Total	2,030	48,720	4,586
Roxana Petroleum Corp.:			
Tippett No. 1	192	.....	.....
Tippett No. 2	*46	.....	.....
Total	238	5,712	539
Smith No. 1	75	1,800	169
Total Roxana	313	7,512	708
Humble O. & R. Co.:			
Smith No. 1	124	.....	.....
Smith No. 2	*140	.....	.....
Smith No. 3	*27	.....	.....
Total	291	6,984	660
Red Bank:			
Smith No. 1	43	1,032	99
Smallwood & Dunn (formerly Allsman & Bell):			
River Bed No. 1	7	.....	.....
River Bed No. 3	245	.....	.....
Total	252	6,048	571
Savoy-Mazda:			
Smith No. 1	67	1,608	153
Grand total all leases	18,686	448,464	42,000

*Denotes wells gauged November 15. Other gauges as of October 31.

PENNSYLVANIA MARKETS

OIL CITY, Pa., Nov. 19.—Gasoline and naphtha remained unchanged in the Pennsylvania territory during the week. Weather conditions were far from being suitable for motoring and actual consumption of motor fuel was at a minimum. Fuel oil also was unchanged over a week ago. Bright stock is now very weak and cylinder stocks are weak. Kerosenes are softer than they were a week ago but there was no price change. Neutrals and wax are also unchanged.

Classified Wants

RANCHES AND FARM LANDS

SELLING OUT Colorado ranches. $2.50 to $5 per acre. 80 to 10,000 acres. J. Brown, Florence, Colo.

FOLLOW
MID-KANSAS OIL & GAS CO.
into
Brewster County
40 to 400,000 acres
Turney ranch and other lands.
Write for geological maps.
R. E. PLUMBE
646 First Nat. Bank Bldg.,
El Paso, Texas.

A SURE INVESTMENT

Hardwood timber is getting scarce and the demand is growing. To close up an estate I will sell 1,500 acres fine post oak and red oak timber and land. In N. W. corner of Lamar County, Texas. Just out of Red River bottom to the North and Bois D'Arc to the West. Sure to develop oil in the near future. Price right. No chance to lose. C. I. Broad, Paris, Tex.

FOR SALE 16,000 acre ranch Brewster County. Fenced, well watered, oil possibilities. 15/16 oil and gas rights $1.50 acre bonus 97½ cents due State. Easy terms. Write for list West Texas fee lands, royalties. Leases 30c up. J. L. Ferguson, Box 462, San Angelo, Tex.

BUY FROM THE OWNER
LEASES—RANCHES—ROYALTIES

Thirty years a resident in the Center of West Texas. We know the Ranchmen, and can obtain the Best Prices.
T. L. BENSON,
306 S. Chadbourne St., San Angelo, Tex.

MONEY RAISING

RAISE CAPITAL

Through sale of securities in your corporation. Worthy enterprises only. Twenty-five years' experience. Highest references.

NORTHCLIFFE,
25 West Forty-third, New York

DO YOU NEED MONEY for organizing or financing oil or mining deals? Write 131 E. 13th. Oklahoma City, Okla.

FINANCE YOUR OWN project with shares bonded. Quickest, most satisfactory known method of raising capital. Information free. Bankers Interstate Security, Electric Bldg., Denver, Colo.

REFINING AND MARKETING

COPPER COMPANIES BUY 4,000,000 BBLS. OF OIL

The California Petroleum Corp. has closed contracts with the Greene-Cananea Copper Co., the Inspiration Copper Co. and the Chile Copper Co. in Peru providing for the sale of approximately 4,000,000 bbls. of fuel oil during 1928. These contracts will absorb practically all of the surplus which the California corporation will have in excess of its shipments to West and East Coast buyers.

The corporation has contracts covering sale of crude oil, gasoline and fuel oil to East Coast buyers. In addition, through its Montana subsidiaries the company has a large fuel oil contract with the Great Northern Railroad.

REORGANIZATION PLAN OF AMERICAN REFINING

WICHITA FALLS, Tex., Nov. 21.—The reorganization plan of the American Refining Co. has been approved by approximately 90 per cent of the unsecured creditors. The company was recently placed in the hands of receivers.

The plan as outlined to the creditors provides for the operation of the company properties by a creditors' committee. The members of this committee are Fred W. Catterall, cashier of the First National Bank of Galveston, Tex.; F. F. Florence, vice president of the Republic National Bank of Dallas, Tex.; L. G. Hawkins, president of the Waggoner National Bank of Vernon, Tex.; J. C. Doneghy of St. Louis, Mo., and Frank Kell, J. C. Mytinger and E. H. Eddleman of Wichita Falls.

It is expected that as soon as possible the company will be taken out of the hands of the receivers. The unsecured claims of the company total $5,471,000.

NEW YORK STANDARD BUYS RUSSIAN OIL

NEW YORK, Nov. 22.—The Standard Oil Co. of New York has contracted with the Soviet Oil Trust for a minimum of 60,000 tons of oil products for six years in addition to that purchased on previous contracts. The total now contracted for amounts to about 1,400,000 tons a year. It is understood that the Vacuum company expects to increase these contracts early next year.

REPORT ON GASOLINE SUIT

CHICAGO, Nov. 19.—Charles Martindale, of Indianapolis, Ind., Special Master in Chancery in the suit of the United States Government against Standard Oil Co. of Indiana and 28 other refiners involved in "the patent club" covering cracking process, is said to have completed the taking of testimony and to be working on his report which will be made to the United States Circuit Court of Appeals in Chicago. This was an especially expedited case and was heard before three of the local judges of that court.

SPENCER'S NEW QUARTERS

CHICAGO, Nov. 19.—The Spencer Petroleum Co., is now occupying its new quarters in the Midland Building at 168 West Adams Street. The new quarters are spacious and well arranged.

MICHIGAN OIL MEETING

The annual meeting of the Michigan Independent Oil Men's Association will be held at the Statler Hotel, Detroit, February 2 and 3. The convention program will be announced after the first of the year.

USE OF FUEL OIL BY RAILROADS LESS; DIESEL OIL DEMAND GREATER

A slight decrease in the use of fuel oil by the railroads of the United States during 1926 is shown by the survey just released by the Department of Commerce, Bureau of Mines. The decrease in 1926 resulted from the generally higher prices, especially in the South Central states. General consumption of oil fuel by Class 1 railroads in 1926 decreased .33 per cent and the fuel oil consumed by all classes decreased .9 per cent based on the 1925 consumption. The consumption of all kinds of fuel increased .53 per cent on Class 1 railroads over the same period.

During 1926 a total of 71,446,956 bbls. of fuel oil was purchased by the 152 Class 1, 2, and 3 railroads. Of the total amount purchased, 68,836,850 bbls. were consumed and 2,610,106 bbls. added to the quantity in storage. Railroad stocks of fuel oil at the end of 1926 amounted to 16,541,845 bbls., as compared with 13,931,739 bbls. at the beginning of the year. Of the total consumed, 59,329,690 bbls. were burned as locomotive fuel, and 9,507,160 bbls. was consumed in shops, power plants, ferry boats, and other uses than for firing locomotives.

Although each of the 152 railroads used some fuel in its operations, comparatively few used it in large quantities. Two railroads purchased more than 5,000,000 bbls. each and these two consumed nearly half of all of the oil fuel burned by the railroads in the United States.

The distribution of the consumption for the two years, as given below, shows that in 1925 more than four-fifths of the oil burned by railroads in the United States was consumed in the South Central states and in California. Railroads operating in these two regions consumed 56,458,246 bbls., or 82 per cent of the 1926 total. A little over 8 per cent was consumed in Oregon and Washington, and a little over 6 per cent in the South Atlantic region. The remaining 4 per cent was consumed in the North Central states and in the area adjacent to the Wyoming and Montana oil fields.

California Decrease

In the California district, the consumption of fuel oil by the railroads decreased 521,322 bbls. over the year, or 2.3 per cent. This lesser amount is attributed principally to the greater efficiency developed by the railroads in its use. The lower prices in the California fuel accounts for the accumulation of greater stocks which were increased 3,335,363 bbls.

The decrease of approximately 12 per cent in the price of Montana and Wyoming fuel is responsible for the increased consumption in this area, the increase being nearly 6 per cent. The slight decrease in the fuel oil price is also reflected in the slightly increased consumption by the roads in the Rocky Mountain district.

The slight decrease in the fuel oil consumption by railroads in the central states, north of a line between Kansas City and St. Louis is due to the generally higher price which over the year averaged approximately 10 per cent more than 1925. The consumption of oil fuel is small in this district, however, and over 70 per cent of the oil which is purchased for use here is consumed in the repair shops and power plants.

Next to California, the largest decrease in the consumption of fuel oil was in the South Central states which amounted to 258,999 bbls., or .79 per cent. This is due principally to the increased prices which averaged between 13 to 16 per cent higher over the year, among the various principal users. In Kansas, Missouri and Oklahoma, where coal was available at two-thirds the price paid for it in 1920, some oil-burning locomotives were converted to coal. Increased economies in the use of oil was also a factor in decreasing the amount of oil consumed in this district.

Increased Economies

Increased economies in the use of oil fuel along the Atlantic Coast and east of the Appalachian Mountains is the principal factor in the lesser consumption of oil fuel by the railroads in this area. Fully 45 per cent of the fuel oil used here went for consumption in power plants, shops and uses other than firing locomotives.

From 15,577,670 bbls. in 1906, the consumption of oil as a locomotive fuel has grown more than fourfold in 20 years. Although complete statistics of fuel oil burned by railroads prior to 1925 are not available, the Interstate Commerce Commission has compiled and published for a number of years the quantity of oil burned in locomotives operated by Class 1 railroads. This represented in 1926 about 85 per cent of the total oil consumed as railroad fuel, the remainder being burned in shops, power plants, and vessels, and in locomotives operated by Class 2 and 3 railroads. With these figures is a statement of the number of oil-burning locomotives in service on Class 1 railroads.

Fuel Oil Consumed by Locomotives (Class 1 Railroads Only)

Year	No. of Oil-Burning Locomotives	Bbls. of Oil Consumed	Pct. Oil to Total Fuel Consumed
1917	***	42,973,555	7.15
1918	***	39,022,785	6.58
1919	***	37,763,361	7.12
1920	***	45,944,539	7.58
1921	***	39,558,181	8.17
1922	***	43,526,787	8.55
1923	6,962	55,580,138	9.32
1924	7,373	58,949,918	10.87
1925	7,112	58,519,685	10.80
1926	7,304	58,329,579	10.71

***Not available.

Diesel Oil Demand

From the above table, no decided change in the geueral use of oil may be seen either in replacing coal or in coal replacing oil but there is an important

(Continued on Page 141)

W. J. HUNGATE DEAD

SHREVEPORT, La., Nov. 22.—News has been received here of the death, in Philadelphia, Pa., of W. J. Hungate, formerly secretary and general manager of the Great Southern Refining Co., who built a plant here in 1923 but operated it for only a short time. Mr. Hungate was 54 years old.

RAILROAD FUEL OIL PURCHASES, STOCKS, AND CONSUMPTION, 1926
(In Barrels of 42 U. S. Gallons)

District—	Purchases	Stock during 1926 Beginning of Year	Stock during 1926 End of Year	Change	Total Consumption 1926	Total Consumption 1925
California	27,377,704	4,032,190	7,367,553	3,335,363	24,042,341	24,563,663
Oregon-Washington	5,655,099†	406,489	465,770	59,281	5,595,818	5,291,603
Rocky Mountain	2,430,483	109,709	116,409	6,700	2,423,783	2,419,729
North Central	158,212	9,245	11,873	2,628	155,584	159,476
South Central	31,586,196	9,128,603	8,298,894	829,709*	32,415,905	32,674,904
Atlantic	4,239,262	245,503	281,346	35,843	4,203,419	4,351,744
	71,446,956	13,931,739	16,541,845	2,610,106	68,836,850	69,461,119

†Represents stock decrease. *Of this quantity 4,982,353 bbls. was obtained from Montana and Wyoming; the remainder from California.

RESCIND RULING ON WISCONSIN REBATES

CHICAGO, Nov. 19.—The Wisconsin Bureau of Markets has rescinded the action taken in August of last year which limited the making of contracts through which large buyers of gasoline over the entire State or for that matter anywhere in the Standard of Indiana territory could lump their purchases made at all points and secure the larger discount to which they became entitled through the total of their monthly purchases. In August, 1926, the ruling was made by the Wisconsin authorities that contracts must be confined to a single city or township. This was done on the complaint of independent dealers that the larger companies through the operation of these agreements gave a larger discount than the smaller dealer could do whose operations were confined to a restricted territory.

In the spring and early summer of this year, there were hearings on this ruling as some of the companies in the State objected to the limiting of their contract territory and a vote was taken of the independent dealers. Nothing was done at that time owing to the diversity of opinions expressed. Last week the Bureau of Markets rescinded the order effective November 15. The rescinding order is accompanied by the statement that the Bureau of Markets finds that the restricting rule works against the farming sections.

Regarding the rebate system as practiced, the bureau states that "it believes that these rebates can and should be done away with through the competitive measures of the independent jobbers. Until some action has been taken along this line the department will defer action on the recommendation made at the meeting of August, 1926, that rural contracts might be written throughout a local competing territory."

BARNSDALL SALES MEETING

George D. Locke, vice president of the Barnsdall Refineries, Inc., in charge of sales, held an important meeting of the company's salesmen at Tulsa on November 18, at which plans were made for the coming year. Those in attendance were W. W. Rice, assistant sales manager, Chicago; and the following district sales manager: J. T. White, St. Paul; George W. Zell, St. Louis; W. W. Nicholas, Milwaukee; Dan C. Miller, Detroit; E. R. Burger, Indianapolis; John T. Kerin, Wichita, and Dan Roberts, Oklahoma City.

TO REPRESENT BUYERS

E. F. Fitzpatrick, who has had charge of the Tulsa office of the American Petroleum Products Co., has made arrangements to represent several companies as a buyer. Mr. Fitzpatrick will continue to represent the American Petroleum Products Co. in addition to handling the new accounts. Offices will continue to be located in the Atlas Life Building of Tulsa.

GASOLINE PLANT BURNED

The natural gasoline plant of the Dixon Creek Oil Co., located in the Hutchinson County (Panhandle Field) of Texas was destroyed by fire on November 20. The plant, which was of the oil absorption type had been in operation for almost a year. It had a rated capacity of 10,000,000 cubic feet of gas daily. The origin of the fire is not known. Officials of the company have announced that the plant will be rebuilt.

Brief Items for Plant Operators

Utah Oil Refining Salt Lake City Plant Placed in Operation

DENVER, Colo., Nov. 19.—The Utah Oil Refining Co., subsidiary of the Standard Oil Co. of Indiana, has just completed and placed in operation at its plant on the north shore of the Great Salt Lake near Salt Lake City, Utah, a new battery of Holmes-Manley pressure stills at a cost of $600,000. Other improvements costing $1,000,000 have been completed within the past year. Total investment now is in excess of $5,000,000. The plant has a charging capacity of 5,000 bbls. of crude oil per day, which with pressure still capacity, brings total up to 8,000 bbls.

The plant is unique in one respect. It is located in the center of a state that has no oil-producing fields of importance and crude has to be transported long distances by rail. At present most of its oil comes from Wyoming and Colorado. For a while it received shipments from New Mexico and at one time transported oil from Montana, this oil passing through Wyoming and Colorado and involved one of the longest shipments for crude by rail in the country. Supplies now are being developed nearer home. Considerable oil is being received from the La Barge Field in southwestern Wyoming, the oil being trucked from the field to Opal where it is transferred to tank cars. A contract recently was made with the California Petroleum Corp. for its output from the La Barge Field under an agreement that provides for the construction of a pipe line when production amounts to 2,000 bbls. a day. The development is expected to reach that figure shortly and plans provide for building the line in the spring.

Greater Gasoline Output

Utah Oil Refining Co. estimates that its output of gasoline in 1928 will aggregate 50,000,000 gallons. The product is shipped into seven states. In addition, it has an output of 200 tons of paraffin wax per month for which it has developed a profitable market, most of it being exported to China and Japan. The plant occupies 120 acres and gives employment to 400 persons exclusive of 250 employed in other departments. Daily crude oil receipts at present average 5,150 bbls. These represent one train load per day. Outgoing products equal a train load each day.

John C. Howard, president of the company, is given much of the credit for the successful development of the enterprise. Eighteen years ago he started the plant which at that time consisted of one still with a charging capacity of 10 bbls. a day. Upon one occasion he found it necessary to move the plant. The moving bill was $30. The company has been active in exploration for oil in Utah, and while it has not yet succeeded in opening a supply in its home State, it is still confident that oil will be found. Its wildcatting has not been, however, entirely devoid of results. One well opened a helium deposit which has been made into a helium reserve by the United States Government. Another wildcat opened a gas field at Cisco where another company now is manufacturing carbon black.

NEW PHILLIPS PLANT IN THE BOWERS POOL

The Phillips Petroleum Co. has announced plans to build a natural gasoline plant of the oil absorption type in the Bowers Pool of the Gray County, Texas, Panhandle. The plant which will be completed by February, will have an initial capacity of 10,000,000 feet of gas daily with provision made to enlarge the operation as additional gas becomes available.

The plant will be the ninth of the Phillips company in the Texas Panhandle. The total capacity of the nine plants is approximately 200,000,000 feet of gas daily. In addition to the natural gasoline plant, the company will build a water system in the Bowers Field for general use by oil operators.

CLEANING SOLVENT CONFERENCE DEC. 2

The Bureau of Standards has announced a general conference of producers and consumers of dry-cleaning solvent (Stoddard Solvent) to discuss a specification for petroleum distillate. This distillate has been recommended by the National Association of Dyers and Cleaners as a basis for consideration in the establishment of a commercial standard for this commodity under the procedure of the Bureau of Standards.

Those who desire to secure copies of the proposed specification should communicate with I. J. Fairchild, acting chief, Commercial Standards Unit, Bureau of Standards, Washington, D. C. The conference is to be held at 10 a. m., Friday, December 2, in Room 704, Commerce Building, Washington, D. C.

SOUTHWESTERN CORP. BUYS NEWTON PROCESS

Announcement is made of the purchase of control of the Newton Process Manufacturing Co. of Fullerton, Calif., by the Southwestern Engineering Corp. of Los Angeles. The deal was negotiated by R. D. Clarke and D. W. Newton of the Newton Process Munufacturing Co., and B. M. Snyder, representing the Southwestern Engineering Corp.

The new board of directors consists of A. B. Menefee, H. Schwartz, Julius Kobernik, Frank W. Newton, G. W. Burnett and B. M. Snyder. Management will be practically the same as the Southwestern Engineering Corp. and it is proposed to continue the manufacture of Newton equipment in practically the same form as heretofore.

The Newton Process Manufacturing Co. has specialized in the manufacture of absorption plant equipment since the formation of the company in 1922. Its principal products are absorption towers, fractionating towers, stills, heat exchangers, condensers, gas coolers, and accessory equipment for absorption plant use. No change will be made in the manufacture of this equipment and Hurley Brothers of Tulsa, Okla., will continue to represent the company for sale of its equipment in the Mid-Continent oil fields.

The Newton Process Manufacturing Co. has been a very successful company and the purchase of control by the Southwestern Engineering Corp, it is said, will effect a decided reduction in operating costs and overhead by combining the manufacture of its products with those of the Southwestern Engineering Corp. The latter company now has offices in New York City as well as Tulsa, Okla., and has recently established a branch at Montreal, Quebec.

AMONG THE TECHNICAL MEN

Among the younger technical men in the refining industry who have had a rapid rise is Arthur L. Davis, chief chemist of the Empire Oil & Refining Co. Mr. Davis had a thorough training in chemistry both in the laboratory and on a commercial scale having graduated in chemistry from William Jewell College at Liberty, Mo., in 1916, and followed this training with two years of graduate work at the University of Missouri where he received a Master of Arts degree. He then took a position as research assistant in the physical laboratory of the Massachusetts Institute of Technology but soon resigned to enter the Chemical Warfare Service of the United States army.

Arthur L. Davis

Development work in the nitrate division of the ordnance department followed and he was then transferred to the Federal Geophysical Laboratory at Washington, D. C. He continued this work after the war in a civilian capacity. Later for one year ending in 1920, he was at the government research laboratories of the American University at Washington, D. C.

His work there led indirectly to his accepting a position with the Standard Oil Co. of Indiana as research chemist at its Wood River refinery. These duties were assumed in January of 1922, and about one year later he was placed in charge of the small scale development and inspection research work.

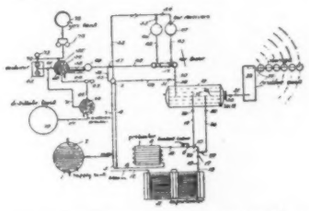
He joined the Empire Oil & Refining Co. in January, 1925, as chief chemist and was given charge of all research and control work at the four refineries of the company. His office and research laboratory is located at the company's refinery at Okmulgee, Okla.

Along with these duties Mr. Davis has been active in various technical societies. He is a member of the American Chemical Society, the American Society for Testing Materials and the Institute of Petroleum Technologists. He is also a member of several honorary fraternities.

Recent Patents

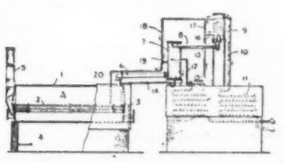
(Additional Patents on Page 165)

1,646,760. Process for Handling Crude Oil and Residuals. Albert E. Miller, Chicago, Ill., assignor to Sinclair Refining Co., Chicago, Ill., a corporation of Maine. Filed May 9, 1921. Serial No. 467,891. Three claims. (Cl. 196—84.)



1. A process of treating asphaltic petroleum oils and residues for separating constituents volatile below their cracking temperature from asphaltic residues nonvolatile without substantial cracking of the separated volatile constituents which comprises, maintaining within a still a liquid body of asphaltic residues, preheating the oil to be treated under pressure, and preheating a neutral gas to a temperature in excess of 650 degrees Fahrenheit, reducing the pressure on the oil and then mixing it with the preheated neutral gas, spraying the mixture into the vapor space of the still and introducing a heated neutral gas into the still through the body of asphaltic residues, maintaining the temperature in the still at about 650 degrees Fahrenheit, withdrawing the constituents volatilized under the conditions prevailing in the still as a vapor and withdrawing the asphaltic residues as a liquid substantially free from said volatile constituents from the body thereof in the still.

1,646,619. Art of Fractional Distillation. Nathaniel E. Loomis, Elizabeth, N. J., and Warren K. Lewis, Newton, Mass, assignors to Standard Development Co., a corporation of Delaware. Filed July 21, 1922. Serial No. 576,611. Four claims. (Cl. 196—72.)



3. Process of continuously distilling hydrocarbon oil of the character of petroleum to obtain products having a relatively narrow range of boiling points, said process comprising distilling the oil, passing vapors therfrom through a fractionating zone, preheating at least a portion of feed oil passing to the distilling zone by indirect heat exchange with vapors from said fractionating zone, thereby partially condensing such vapors, introducing the preheated feed oil into an intermediate portion of said fractionating zone and flowing it downwardly therethrough in contact with ascending vapors, regulating the amount of condensation by bypassing to the fractionating zone any portion of the feed oil in excess of that required in said heat exchange, and condensing vapors passing from the partial condensation zone.

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

GASOLINE AND NAPHTHA

	Nov. 22		Nov. 15		Nov. 8	
OKLAHOMA (Group 3)—						
50-52 450 endpoint	.05¾	.06	.05¾	.06	.05¾	.06
56-58 450 endpoint	.05¾		.05¾		.05¾	
58-60 450 endpoint	.05¾		.05¾		.05¾	
58-60 437 endpoint (U. S. Motor)	.06	.06¼	.06	.06¼	.06	.06¼
60-62 400 endpoint	.06¼	.06⅝	.06½	.06⅝	.06½	.06⅝
64-66 375 endpoint	.06¾	.07	.06¾	.07	.06¾	.07
68-70 360 endpoint	.07⅛	.07¼	.07⅛	.07¼	.07⅛	.07¼
64-66 437 endpoint (blend)	.06	.06¼	.06	.06¼	.06	.06¼
KANSAS—						
58-60 437 endpoint (U. S. Motor)	.06¼	.06⅜	.06¼	.06⅜	.06¼	.06⅜
NORTH TEXAS—						
56-58 450 endpoint	.05¾		.05¾		.05¾	
58-60 450 endpoint	.05¾	.05⅞	.05¾	.05⅞	.05¾	.05⅞
58-60 437 endpoint (U. S. Motor)	.06	.06⅛	.06	.06⅛	.06	.06⅛
60-62 400 endpoint	.06½		.06½		.06⅜	.06½
64-66 390 endpoint	.06⅝		.06⅝		.06⅝	
64-66 375 endpoint	.06¾	.07	.06¾	.07	.06¾	.07
68-70 360 endpoint	.07		.07		.06⅞	
64-66 437 endpoint (blend)	.06¼		.06¼		.06¼	
NORTH LOUISIANA—						
58-60 437 endpoint (U. S. Motor)	.06½		.06½		.06½	
ARKANSAS—						
58-60 437 endpoint (U. S. Motor)	.06½		.06½		.06½	
PENNSYLVANIA—						
52-54 Naphtha	.07⅜	.07½	.07⅜	.07½	.07⅜	.07½
54-56 Naphtha	.07¾	.08	.07¾	.08	.08	.08¼
58-60 Gasoline	.07¾	.08	.07¾	.08	.08	.08¼
60 Gasoline	.08¼	.08½	.08½	.08¾	.08½	.08¾
62 Gasoline	.09⅛	.09¼	.09⅛	.09¼	.09⅛	.09¼
64 Gasoline	.09¼	.09½	.09¼	.09½	.09¼	.09½
CALIFORNIA—						
58-60 437 endpoint (U. S. Motor) domestic	.08	.08½	.08	.08½	.08	.08½
CHICAGO DISTRICT (Based on Group 3)—						
50-52 450 endpoint (Naphtha)	.06		.05⅞	.06	.05⅞	.06
56-58 450 endpoint	.05⅞	.06	.05⅞	.06	.05⅞	.06
58-60 437 endpoint (U. S. Motor)	.06	.06¼	.06	.06¼	.06	.06¼
60-62 400 endpoint	.06½	.06⅝	.06½	.06⅝	.06½	.06⅝
64-66 375 endpoint	.07	.07⅛	.07	.07⅛	.07	
68-70 360 endpoint	.07¼	.07⅜	.07¼	.07⅜	.07¼	.07⅜
64-66 437 endpoint (blend)	.06¼		.06¼		.06¼	

NATURAL GASOLINE

	Nov. 22		Nov. 15		Nov. 8	
OKLAHOMA (Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.05¾		.05¾		.05⅞	.06
Grade AA, 80-87.9, 375 e.p., rec. 90%	.05½	.05⅝	.05¾		.05⅞	
Grade B, 76-83.9, 375 e.p., rec. 85%	.05¼		.05½	.05⅝	.05¾	
Grade BB, 84-92, 375 e.p., rec. 85%	.05⅛	.05¼	.05½		.05¾	
Grade C, 80-92, 375 e.p., rec. 78%	.05		.05½		.05½	.05⅝
NORTH TEXAS—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.05¾		.05¾		.05⅞	
Grade AA, 80-87.9, 375 e.p., rec. 90%	.05½		.05¾		.05⅞	
Grade B, 76-83.9, 375 e.p., rec. 85%	.05¼		.05½	.05⅝	.05¾	
Grade BB, 84-92, 375 e.p., rec. 85%	.05¼		.05½		.05¾	
Grade C, 80-92, 375 e.p., rec. 78%	.05		.05½		.05½	.05⅝
NORTH LOUISIANA—						
Grade AA, 80-87, 375 e.p., rec. 90%	.06		.06		.06⅛	
Grade BB, 84-92, 375 e.p., rec. 85%	.05⅞		.05⅞		.06	
Grade C, 80-92, 375 e.p., rec. 78%	.05½		.05½		.05½	
CALIFORNIA—						
75-85, 375, 390 endpoint	.09	.09½	.09	.09½	.09	.09½
CHICAGO DISTRICT (Based on Group 3)—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.05¾		.05¾		.05⅞	.06⅛
Grade AA, 80-87.9, 375 e.p., rec. 90%	.05½		.05¾		.05⅞	
Grade B, 76-83.9, 375 e.p., rec. 85%	.05¼		.05½		.05¾	
Grade BB, 84-92, 375 e.p., rec. 85%	.05¼		.05½		.05¾	
Grade C, 80-90, 375 e.p., rec. 78%	.05		.05½		.05½	.05⅝

Note: All natural gasoline, except California, is noncorrosive.

BURNING OIL

	Nov. 22		Nov. 15		Nov. 8	
KANSAS—						
41-43 water white Kerosene	.04¾	.05	.04¾	.05	.04¾	.05
OKLAHOMA (Group 3)—						
41-43 water white Kerosene	.04½	.04¾	.04½	.04¾	.04⅝	.04¾
42-44 water white Kerosene	.05	.05⅛	.05	.05⅛	.05	
NORTH LOUISIANA—						
41-43 prime white Kerosene	.05	.05¼	.05	.05¼	.04¾	.05
NORTH TEXAS—						
41-43 water white Kerosene	.04½	.04⅝	.04⅝		.04⅝	
40-42 water white Kerosene	.04¼	.04½	.04⅜	.04½	.04⅜	.04½
ARKANSAS—						
41-43 water white Kerosene	.05	.05¼	.05	.05¼	.04½	.04¾
PENNSYLVANIA—						
43 Kerosene prime white	.06¼	.06½	.06¼	.06½	.06¼	.06½
45 Kerosene water white	.06½	.06¾	.06½	.06¾	.06⅜	.06⅝
46 Kerosene water white	.06¾	.07	.06¾	.07	.06¾	.07
47 Kerosene water white	.07	.07¼	.07	.07¼	.07	.07¼
300 Mineral Seal	.07¼	.07½	.07¼	.07½	.07¼	.07½
CALIFORNIA—						
38-40 water white Kero. (high burning test)	.05½	.06	.05½	.06	.05½	.06
Engine distillate, 43-45 445 endpoint	.07	.07¾	.07	.07¾	.07	.07¾
Engine distillate, 42-44 480 endpoint	.06¾	.07	.06¾	.07	.06¾	.07
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white Kerosene	.04½	.04¾	.04½	.04¾	.04½	.04⅝
42-44 water white Kerosene	.05		.05		.05	

FUEL OILS

KANSAS—	Nov. 22		Nov. 15		Nov. 8	
22-26 Fuel Oil	.80	.85	.82½	.87½	.82½	.87½
18-22 Fuel Oil	.80		.80	.82½	.80	.82½
32-36 Gas Oil	.02½		.02⅝		.02⅝	
38-40 Distillate	.03¼	.03⅜	.03¼	.03⅜	.03¼	.03⅜
OKLAHOMA (Group 3)—						
Below 18 Fuel Oil	.70	.75	.72½	.75	.72½	.75
18-22 Fuel Oil	.75	.80	.77½	.80	.77½	.80
22-26 Fuel Oil	.80	.82½	.80	.82½	.80	.82½
24-26 Fuel Oil	.82½	.85	.82½	.85	.82½	.85
26-30 Fuel Oil	.87½		.87½		.87½	
28-30 Fuel Oil	.92½	.95	.92½	.95	.92½	.95
32-36 Gas Oil (dark)	.02⅝	.02½	.02½		.02½	
32-36 Gas Oil (straw overhead)	.02½		.02⅝		.02⅝	
36-38 Distillate	.03	.03¼	.03	.03¼	.03	.03⅛
38-40 Straw Distillate	.03⅛	.03¼	.03⅛	.03¼	.03⅛	.03¼
NORTH TEXAS—						
24-26 Fuel Oil (sellers' cars)	.80	.82½	.80	.82½	.80	.82½
32-36 Gas Oil (straw)	.02¼	.02½	.02¼	.02½	.02¼	.02½
38-40 Straw Distillate	.03	.03⅛	.03	.03⅛	.03	.03⅛
NORTH LOUISIANA—						
18-20 Fuel Oil	.90	1.00	.90	1.00	1.05	1.10
32-36 Gas Oil	.03	.03¼	.03	.03¼	.03	.03¼
ARKANSAS—						
36-38 Distillate	.03¼	.03½	.03¼	.03½	.03¼	.03½
32-36 Gas Oil (straw)	.03	.03¼	.03	.03¼	.03¼	
16-20 Refinery Fuel Oil	.90	1.00	.90	1.00	1.00	1.05
GULF COAST (South Texas)—						
Gas Oil	.03⅞	.04	.03⅞	.04	.03⅞	.04
Fuel Oil	1.25	1.30	1.30	1.35	1.35	1.40
PENNSYLVANIA—						
30-34 Fuel Oil	.04¼	.04½	.04¼	.04½	.04¼	.04½
36-40 Fuel Oil	.04⅜	.04⅝	.04⅜	.04⅝	.04⅜	.04⅝
CALIFORNIA—						
33-36 Distillate	.03½	.03¾	.03½	.03¾	.03½	.03¾
27-32 Distillate	.02¾	.03¼	.02¾	.03¼	.02¾	.03¼
*15-20 Fuel Oil, Bunkers (at tide water)	1.00		1.00		1.00	
15-20 Fuel Oil (cargo lots)	.90		.90		.90	
27 plus Diesel	1.15	1.19	1.15	1.19	1.15	1.19
CHICAGO DISTRICT (Based on Group 3)—						
24-26 Fuel Oil (sellers' cars) Group 3	.82½	.85	.80	.85	.80	.85
22-26 Fuel Oil (sellers' cars) Group 3	.80	.82½	.77½	.82½	.80	.82½
18-22 (Group 3)	.75	.80	.75	.77½	.77½	.80
16-20 Smackover	1.00	1.02½	1.00	1.02½	1.00	1.02½
32-36 Gas Oil (zero)	.02¾	.03¼	.02⅝	.03⅛	.02⅝	.03
32-36 Gas Oil (industrial)	.02½	.02¾	.02½	.02⅝	.02½	.02⅝
36-38 Distillate	.03⅛	.03¼	.03	.03⅛	.03	.03⅛
38-40 Straw Distillate	.03¼	.03⅜	.03⅛	.03⅜	.03⅛	.03¼

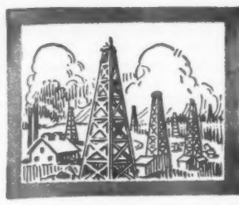
*Bunkers.

LUBRICATING OIL AND WAX

	Nov. 22		Nov. 15		Nov. 8	
OKLAHOMA (Group 3)—						
100 vis., 2 color, 20-25 cold test	.06¼	.06½	.06¼	.06½	.06¼	.06½
100 vis., 3 color, 20-25 cold test	.06	.06¼	.06	.06¼	.06	.06¼
150 vis., 3 color, 20-25 cold test	.08¼	.08½	.08¼	.08½	.08¼	.08½
150 vis., 4 color, 20-25 cold test	.08	.08¼	.08	.08¼	.08	.08¼
180 vis., 3 color, 23-28 cold test	.03⅜	.10	.09⅜	.10	.09¾	.10
180 vis., 4 color, 23-28 cold test	.09¼	.09¾	.09¼	.09¾	.09½	.09¾
180 vis., 5 color, 23-28 cold test	.09⅛	.09⅞	.09¼	.09½	.09¼	.09½
200 vis., 3 color, 23-28 cold test	.09½	.10½	.09½	.10½	.10	.10½
200 vis., 4 color, 23-28 cold test	.09⅜	.10¼	.09⅜	.10¼	.09¾	.10¼
200 vis., 5 color, 23-28 cold test	.09¼	.10	.09¼	.10	.09⅝	.10
240 vis., 3 color, 25-30 cold test	.13¾	.14	.13¾	.14	.13¾	.14
240 vis., 4 color, 25-30 cold test	.13¼	.13½	.13¼	.13½	.13¼	.13½
240 vis., 5 color, 25-30 cold test	.12¼	.12½	.12¼	.12½	.12¼	.12½
280 vis., 3 color, 25-30 cold test	.15½	.16	.15½	.16	.15½	.16
280 vis., 4 color, 25-30 cold test	.15	.15½	.15	.15½	.15	.15½
280 vis., 5 color, 25-30 cold test	.14	.14½	.14	.14½	.14	.14½
Cylinder Stocks:						
600, steam refined, light green	.08	.09¼	.08	.09½	.07	.09
600, steam refined, dark green	.07	.07½	.07	.07½	.05	.06
190-200 vis. @ 210 Bright Stock	.30	.32	.30	.32	.31	.33
150-160 vis. @ 210 Bright Stock	.24	.25	.24	.25	.25	.26
Waxes:						
124-126 White Crude Scale Wax	.02⅝		.02⅝		.02⅝	.02¾
PENNSYLVANIA—						
34 Neutral	.07½	.08	.07½	.08	.07½	.08
34 Sundebloom	.08¾	.09	.08¾	.09	.08¾	.09
36 Miners' Neutral	.07¾	.08	.07¾	.08	.07¾	.08
150, 3 color	.27¼	.27¾	.27¼	.27¾	.27¼	.27¾
180, 3 color	.31	.31½	.31	.31½	.31	.31½
200, 3 color	.32	.32½	.32½	.33	.32½	.33
220, 3 color	.36	.36½	.36	.36½	.36	.36½
600, steam refined	.10¼	.10½	.10¼	.10½	.10¼	.10½
635, steam refined	.11	.11½	.11	.11½	.11	.11½
650, steam refined	.12	.12½	.12	.12½	.12	.12½
600, Pennsylvania flash	.17	.17½	.17	.17½	.17	.17½
*550, E filtered	.15¾	.16	.15¾	.16	.15¾	.16
*600, E filtered	.17	.17½	.17	.17½	.17	.17½
600, E filtered	.16	.16½	.16	.16½	.16	.16½
600, D filtered	.25½	.26	.25½	.26	.25½	.26
550, E filtered	.17½	.18	.17½	.18	.17½	.18
550, D filtered	.21½	.22	.21½	.22	.21½	.22
Pennsylvania Bright Stock	.29	.30	.29	.30	.30½	.31½
†122-124 White Crude Scale Wax	.03	.03⅛	.03	.03⅛	.03	.03⅛
†122-124 White Crude Scale Wax	.03⅛	.03¼	.03⅛	.03¼	.03⅛	.03¼

*At Warren, Pa. †At New York City.

GULF COAST (South Texas)—						
No. 2 color, 100 vis., pale oil	.06	.06½	.06	.06½	.07	.07½
No. 3 color, 200 vis., pale oil	.08½	.09	.08½	.09	.09½	.10
No. 3 color, 300 vis., pale oil	.09½	.10½	.09½	.10½	.10½	.11½
No. 3½ color, 500 vis., pale oil	.11½	.12	.11½	.12	.12½	.13
No. 4 color, 750 vis., pale oil	.14½	.15	.14½	.15	.15½	.16
No. 5 to 6 color, 200 vis., red oil	.07	.07½	.07	.07½	.08	.08½
No. 5 to 6 color, 300 vis., red oil	.08½	.09	.08½	.09	.09½	.10
No. 5 to 6 color, 500 vis., red oil	.09½	.10	.09½	.10	.10½	.11
No. 5 to 6 color, 750 vis., red oil	.12½	.13	.12½	.13	.13½	.14
No. 2 color, 200 vis., pale filtered	.11½	.13	.11½	.13	.12¾	.14
No. 2 color, 300 vis., pale filtered	.12	.13	.12	.13	.14	.14½



REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

No. 2½ color, 500 vis., pale filtered	.12¼	.13	.12¼	.13	.15½	.16½
No. 2½ color, 750 vis., pale filtered	.17	.18	.17	.18	.20	.20½
CALIFORNIA—						
130 vis., 2½-3 color	.09	.10	.09	.10	.09	.10
200 vis., 2½-3 color	.10	.10½	.10	.10½	.10	.10½
300 vis., 3 -3½ color	.10½	.11	.10½	.11	.10½	.11
350 vis., 3½-4 color	.11	.12	.11	.12	.11	.12
400 vis., 3½-4 color	.13	.14	.13	.14	.13	.14
Red Neutral:						
200 vis., 4½-5 color	.08½	.09	.08½	.09	.08½	.09
300 vis., 5 -6 color	.09	.09½	.09	.09½	.09	.09½
400 vis., 5 -6 color	.11	.11½	.11	.11½	.11	.11½
500 vis., 4½-5 color	.11¼	.12	.11¼	.12	.11¼	.12
500 vis., 5 -6½ color	.11	.11½	.11	.11½	.11	.11½
600 vis., 6 plus color	.12	.12½	.12	.12½	.12	.12½

Note: Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

	Nov. 22	Nov. 15	Nov. 8
Gasoline, U. S. Motor, 58-60 437	.08¼	.08 .08¼	.08 .08¼
Kerosene, water white, 41-43	.07½	.07½	.07½
*Fuel Oil, bunker "C," 14-16, per bbl.	1.40	1.45	1.45
*Fuel Oil, Diesel, 28-30, per bbl.	2.10	2.10	2.10
Gas Oil, 28 plus	.05½	.05½	.05½
25 pale Paraffin Oil	.12	.12	.12
28 pale Paraffin Oil	.07¼	.07¼	.07¼
285 red Paraffin Oil	.11½	.11½	.11½
250 red Paraffin Oil	.10½	.10½	.10½
225 red Paraffin Oil	.10	.10	.10
200 red Paraffin Oil	.09½	.09½	.09½
Refined Wax:			
120-122 a.m.p., per lb.	.03⅞	.04	.04
125-127 a.m.p., per lb.	.04	.04¼	.04¼
130-132 a.m.p., per lb.	.04¾	.05	.05
135-137 a.m.p., per lb.	.05½	.05¾	.05¾
Petrolatum, in bbls., carload lots, per lb.:			
Dark green	.01⅞	.01⅞	.01⅞
Amber	.03⅜	.03⅜	.03⅜
Extra amber	.03¾	.03¾	.03¾
Cream	.06¼	.06	.06
Lily white	.09	.08½	.08½

*Lighterage 6.5c a barrel extra.

NEW YORK (BAYONNE) EXPORT PRICES

	Nov. 22	Nov. 15	Nov. 8
Gasoline, U. S. Motor, 58-60 437, in cases	.2390	.2390	.2390
Kerosene, standard white, in cases	.1715	.1715	.1715
Kerosene, water white, in cases	.1815	.1815	.1815
600 steam refined cylinder stock, in bbls.	.17	.17	.17
635 steam refined	.19	.19	.19
650 steam refined	.20	.20	.20
600 Pennsylvania flash	.23	.23	.23
630 Pennsylvania flash	.35	.35	.35
600 Warren E	.25	.25	.25
600 Oil City E	.24	.24	.24
Light 135 Bright Stock	.40	.40	.40
Dark 135 Bright Stock	.38	.38	.38

LOS ANGELES EXPORT PRICES

	Nov. 22	Nov. 15	Nov. 8
Kerosene, water white	.04½ .04¾	.04½ .04¾	.04½ .04¾
U. S. Motor Gasoline, 53-55 437 e.p.	.05¾ .06	.05¾ .06	.05¾ .06

CALIFORNIA CRUDE PRICES
Standard Oil Co.-Union Oil Co. (Effective April 1, 1927)*

Gravity—	Fullerton Seal Beach Long Beach Huntington Beach Richfield Rosecrans-Dom'guez Torrance-Inglewood 1	Whittier La Habra Montebello 2	Kern River Newhall-McKittrick Midway-Sunset Elk Hills Lost Hills Belridge Buena Vista Hills 3	Coyote 4	Santa Fe Springs 5	Coalinga 6	Wheeler Ridge 7	Santa Maria Ventura, Orcutt Salt Lake 8
14°	.85	.85	.75	.85	....	.75	.75	.85
15°	.85	.85	.75	.85	....	.75	.75	.85
16°	.85	.85	.75	.85	....	.75	.75	.85
17°	.85	.85	.75	.85	....	.75	.75	.85
18°	.85	.85	.75	.85	....	.75	.75	.85
19°	.85	.85	.75	.85	....	.75	.75	.85
20°	.85	.85	.77	.85	....	.76	.76	.85
21°	.86	.85	.79	.86	.85	.77	.77	.85
22°	.87	.85	.81	.87	.85	.78	.78	.85
23°	.88	.86	.83	.88	.85	.79	.79	.85
24°	.89	.85	.85	.89	.85	.80	.80	.85
25°	.90	.86	.87	.90	.86	.81	.81	.86
26°	.92	.87	.89	.91	.87	.83	.82	.87
27°	.94	.88	.91	.92	.88	.85	.83	.88
28°	.96	.89	.93	.93	.89	.87	....	.89
29°	.98	.90	.96	.94	.91	.89	....	.91
30°	1.00	.91	.99	.95	.93	.91	....	.93
31°	1.03	....	1.02	....	.95	.93	....	.95
32°	1.06	....	1.05	....	.97	.95	....	.97
33°	1.09	....	1.08	....	.99	.97	....	.99
34°	1.12	....	1.11	....	1.01	.99	....	1.01
35°	1.15	....	....	....	1.03	1.01	....	1.03
36°	1.18	....	....	....	1.06	....	....	1.06
37°	1.21	....	....	....	1.09	....	....	1.09
38°	1.24	....	....	....	1.12	....	....	1.12
39°	1.27	....	....	....	1.15	....	....	1.15
40°	1.30	....	....	....	....	....	....	....
41°	1.33	....	....	....	....	....	....	....
42°	1.36	....	....	....	....	....	....	....

*Column 1—Long Beach, Seal Beach and Huntington Beach crudes, 14 to 32 degrees, inclusive; Richfield and Fullerton, 14 to 30 degrees; Torrance and Inglewood, 14 to 28 degrees; Dominguez, 24 to 42 degrees. Rosecrans crude ranges from 14 to 42 degrees, but only Union Oil Co. posts below 24 degrees.

Column 2—Whittier crude, 14 to 22 degrees; Montebello, 14 to 30 degrees.

Column 3—Kern River, Newhall and McKittrick, 14 to 19 degrees; Midway-Sunset, Buena Vista and Elk Hills, 14 to 33 degrees; Lost Hills and Belridge, 14 to 34 degrees.

Column 8—Salt Lake, 14 to 19 degrees, inclusive; Santa Maria, 14 to 30 degrees; Ventura and Orcutt, 14 to 39 degrees. Posted only by Union Oil Co.

CRUDE OIL GRAVITY PRICE TABLE

Gravity—	Okla., Kans., N. C. Tex., La.-Ark. 1	Smackover, Ark. 2	Stephens, Ark. 3	Gray County (Texas Panhandle) 4	Crane, Upton, Ector, Crockett Counties (West Texas) 5	Salt Creek, Wyo. 6	Grade B & Light Crude (G. Coast) 7	Somerset (South Central Texas) 8
Below 24	....	.85	....	....	....	....	....	....
24 and above	....	1.00	....	....	....	....	....	....
Below 25	....	....	....	....	....	....	1.16	....
25 to 25.9	....	....	....	....	....	....	1.17	....
Below 26	....	....	....	....	.60	....	....	....
26 to 26.9	....	....	....	....	.60	....	1.18	....
27 to 27.9	....	....	....	....	.60	....	1.21	....
Below 28	(*)	....	1.00	....	....	....	....	....
28 to 28.9	1.12	....	1.02	.80	.60	....	1.23	....
29 to 29.9	1.14	....	1.04	.82	.60	1.14	1.25	....
30 to 30.9	1.16	....	1.06	.84	.60	1.16	1.27	....
31 to 31.9	1.18	....	1.08	.86	.60	1.18	1.29	....
32 to 32.9	1.20	....	1.10	.88	.60	1.20	1.31	1.05
33 to 33.9	1.22	....	....	.90	.60	1.22	1.33	1.07
34 to 34.9	1.24	....	....	.92	.60	1.24	1.35	1.09
35 to 35.9	1.26	....	....	.94	.60	1.26	1.37	1.11
36 to 36.9	1.28	....	....	.96	.60	1.28	....	1.13
37 to 37.9	1.30	....	....	.98	....	1.30	....	1.15
38 to 38.9	1.32	....	....	1.00	....	....	....	1.17
39 to 39.9	1.34	....	....	1.02	....	....	....	....
40 to 40.9	1.36	....	....	1.04	....	....	....	....
41 to 41.9	1.38	....	....	1.06	....	....	....	....
42 to 42.9	1.40	....	....	1.08	....	....	....	....
43 to 43.9	1.42	....	....	1.10	....	....	....	....
44 to 44.9	1.44	....	....	1.12	....	....	....	....
45 to 45.9	1.46	....	....	....	....	....	....	....
46 to 46.9	1.48	....	....	....	....	....	....	....
47 to 47.9	1.50	....	....	....	....	....	....	....
48 to 48.9	1.52	....	....	....	....	....	....	....
49 to 49.9	1.54	....	....	....	....	....	....	....
50 to 50.9	1.56	....	....	....	....	....	....	....
51 to 51.9	1.58	....	....	....	....	....	....	....
52 and above	1.60	....	....	....	....	....	....	....

Column 1—Magnolia Petroleum Co. posted new schedule September 14, making price below 30 gravity $1.05 per barrel, with 2 cents increase per degree higher in gravity, taking 30-30.9 gravity at $1.16 as basis, with a top price of $1.60 for 52 and above.

Oklahoma: Prairie Oil & Gas Co., Sinclair Oil & Gas Co., Gypsy Oil Co., March 12; Carter Oil Co., The Texas Company, March 14.

North Central Texas—[Including Ranger, Mexia, Powell, Richland, Wortham, Lytton Springs (Southwest Texas), Iatan and Panola (Magnolia only), Currie, Nocona, Moran and Corsicana light]; Texas, Prairie, Sinclair and Gulf, March 12; The Texas Company, Humble Oil & Refining Co., March 14.

Kansas—Prairie, Sinclair, March 12; Carter, Texas, March 14.

Arkansas and North Louisiana—[Caddo, Bull Bayou, Crichton, De Soto, Haynesville, Homer and El Dorado only]; Standard Oil Co. of Louisiana, March 14; The Texas Company, March 14; Magnolia Petroleum Co., Pine Island, Haynesville and Bull Bayou, El Dorado, Gulf Pipe Line Co., March 14.

Column 2—November 19, Louisiana Oil Refining Co. On November 31, Standard Oil Co. of Louisiana, Magnolia Petroleum Co., Gulf Refining Co., and Atlantic Producing Co.

Column 3—Atlantic Oil Producing Co., March 14.

Column 4—Humble Oil & Refining Co. and Gulf Pipe Line Co., March 14. On August 23 Magnolia Petroleum Co. posted flat 75 cents.

Column 5—Humble Oil & Refining Co., August 23; Kay County Gas Co., Magnolia Petroleum Co., and Gulf Pipe Line Co., August 24.

Column 6—Midwest Refining Co., March 12. All crude over 37 gravity, $1.30 per barrel.

Column 7—Humble Oil & Refining Co. and other major buyers (schedule ends "35 and above"), March 14, with exception of Magnolia Petroleum Co., which stops at 31 degrees gravity. Sun Pipe Line Co. posts 2 cents differential for each degree above 35 gravity and $1.47 for 40 gravity and above.

Column 8—Grayburg Pipe Line Co. and Pioneer Oil & Refining Co., April 7.

*Prices for crude below 28 gravity; Oklahoma, Kansas and Texas, Magnolia Petroleum Co., $1.10, March 12; Arkansas, North Louisiana, March 14. Other companies, 2 cents less for each degree, with exception of Humble Oil & Refining Co., which pays 90 cents for crude below 25 degrees gravity, effective November 16.

CRUDE OIL PRICES

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

*Corsicana heavy (March 14, 1927)....$1.00
Other fields ....See gravity table

*Posted by Magnolia Petroleum Co.

TEXAS PANHANDLE

*Carson County ....$ .75
*Hutchinson County .... .75
*Wheeler County .... .75
Gray County ....See gravity table

*Humble Oil & Refining Co.
Magnolia Petroleum Co., Gulf Pipe Line Co., and Kay County Gas Co., August 23.

*Iatan....Same as Nor.h Texas
Crane-Upton-Crockett....See gravity table
**Glasscock ....$ .80

*Includes Howard County and Westbrook Fields. Kay County Gas Co. pays $1.05 for Howard County crude, effective May 21.
**Magnolia Petroleum Co., Oct. 24.

ARKANSAS-NORTH LOUISIANA

Cotton Valley (March 17) $1.00
Bellevue (Feb. 24, 1927) 1.25
Urania (Nov. 18, 1927) .... .75
East El Dorado (Sept. 20) .... .90
O.her fields....See gravity table

Note—Cotton Valley and Bellevue, Standard Oil Co. of Louisiana, Gulf Refining Co. and Magnolia Petroleum Co.; Urania, Louisiana Oil Refining Corp.; East El Dorado, Magnolia Petroleum Co., Gulf Refining Co.

GULF COAST

(Goose Creek, Hull, Liberty, West Columbia, Orange, Boling, Sour Lake, Humble, High Island, Pierce Junction and Spindletop.)

‡Grade A (March 14) $1.20
Grade B ....See gravity table
*Jennings, La. (March 14)....$1.05
†Saratoga, Batson, Dayton (March 14, 1927) $1.20
§Markham (March 14) 1.00

*Gulf Pipe Line Co. †Sun Pipe Line Co. ‡Humble Oil & Refining Co. and other major buyers. §The Texas Company.

SOUTH CENTRAL AND SOUTHWESTERN TEXAS

*Luling (May 5) $1.00
†Mirando (March 14) 1.00
Rockdale-Minerva (April 15):
38-38.9 gravity 1.27
39-39.9 gravity 1.29
40 and above 1.31
*Thrall ....
Calihan (May 15) 1.75
Lytton Springs (Lockhart) See gravity table
Somerset ....See gravity table

*Posted by Magnolia Petroleum Co. Thrall prices same as North Central Texas less 19½ cents per cwt. freight.
†Magnolia Petroleum Co., Humble Oil & Refining Co., Crown Central Pipe Line Co.

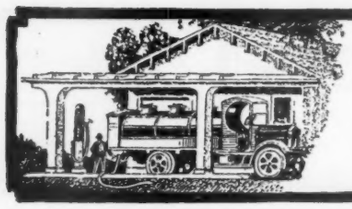
ROCKY MOUNTAIN STATES

Ohio Oil Co.-Midwest Refining Co.

(Effective March 14)

Rock Creek, Wyo. (March 12) $1.25
Salt Creek ....See gravity table
Big Muddy (March 12) $1.25
Mule Creek (May 1) 1.10
Grass Creek, heavy .... .90
Grass Creek, light 1.33
Elk Basin (March 12) 1.33
Lance Creek (March 12) 1.33
Poison Spider 1.00
Notches .... .65
Rex Lake (February 22) 1.10
Osage 1.33
Lost Soldier (contract) .... .95
Greybull-Torchlight 1.33
Hamilton Dome .... .85
Cat Creek (Mont.) 1.33
Sunburst (Mont.) 1.35

(Continued on Page 132)



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns Nov. 22.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
Chicago dist.	16.0	18.0	2.0	12.0
Decatur, Ill.	10.5	12.5	2.0	12.1
E. St. Louis	15.1	17.35	2.0	11.2
Joliet	16.4	18.4	2.0	12.3
Peoria	12.2	12.2	2.0	12.1
Quincy	16.2	18.2	2.0	11.9
Davenport, Ia.	15.5	17.5	3.0	12.3
Des Moines	13.9	15.9	3.0	12.3
Keokuk	17.5	19.5	3.0	12.3
Sioux City	17.1	19.1	3.0	11.9
Duluth, Minn.	15.5	17.5	2.0	12.9
Minneapolis	14.0	14.0	2.0	12.9
Mankato	17.1	19.1	2.0	12.7
LaCross, Wis.	17.2	19.2	2.0	13.0
Milwaukee	16.1	18.1	2.0	11.9
Madison	16.3	18.3	2.0	12.1
Detroit, Mich.	15.8	17.8	3.0	13.7
Grand Rapids	14.0	16.0	3.0	13.6
Saginaw	17.9	19.9	3.0	13.8
Evansville, Ind.	17.0	19.0	3.0	13.0
Ft. Wayne	14.0	14.0	3.0	13.4
Indianapolis	14.2	15.2	3.0	12.2
South Bend	15.0	15.0	3.0	13.4
Fargo, N. D.	15.0	17.0	2.0	14.9
Huron, S. D.	19.5	21.5	4.0	13.9
Sioux Falls	15.0	17.0	4.0	13.4
*K. C., Mo.	14.9	16.9	3.0	10.6
*Springfield	16.8	18.8	3.0	11.5
*St. Louis	15.6	17.9	2.5	11.3
*St. Joseph	14.5	16.5	3.0	11.2
Wichita, Kans.	14.8	16.8	2.0	10.8
Bartlesville, Ok.	15.8	17.8	3.0	10.8

NAPHTHAS

	Tank wagon	Tank car
Oleum spirits	16.0	10.75
V. M. & P. naphtha	18.0	12.75
Cleaner's naphtha	18.0	13.75
Stanisol	19.0	....

Tank wagon prices f.o.b. Chicago; tank car prices f.o.b. Whiting.

STANDOLIND FURNACE OIL

Less than 100 gallons	9.0
100 to 799 gallons	8.0
800 or more gallons	7.5

Tank wagon prices of gasoline subject to discount of 1 cent a gallon on dumps of 50 gallons or more throughout territory except Chicago district where discount applies only to dumps of 100 gallons. Kerosene subject to 1 cent discount on dumps of 50 gallons or more.

Outside the Chicago district, the following quantity discount schedule is in effect on monthly tank wagon deliveries of gasoline; 6,000 gallons or more, 1½ cents; 10,000 gallons or more, 2 cents; 15,000 gallons or more, 3 cents. These discounts include the 1 cent allowed on dumps of 50 gallons or more at one delivery.

Within the Chicago district, the following quantity discount schedule is in effect on tank wagon deliveries of gasoline; 750 to 2,000 gallons, one-half cent; 2,000 to 3,000 gallons, three-fourths cent; 3,000 to 6,000 gallons, 1 cent; 6,000 to 10,000 gallons, 1½ cents; 10,000 to 15,000 gallons, 2 cents; 15,000 gallons or more, 3 cents. These discounts are in addition to the special discount of 1 cent on dumps of 100 gallons or more at one delivery.

If the quantity bought during the year is equal to or exceeds 12 times the agreed monthly quantity, the discount is paid or credited on the entire quantity at the close of the term less the monthly payments made during the year.

*State tax 2 cents; remainder city tax.

OHIO

Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
All Ohio points	17.0	19.0	3.0	14.5

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.*

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
Dallas, Tex.	14.0	17.0	3.0	11.0
Fort Worth	14.0	16.0	3.0	10.0
Houston	13.0	15.0	3.0	15.0
San Antonio	13.0	15.0	3.0	10.0
El Paso	14.0	15.0	3.0	16.0
Texarkana	15.0	18.0	3.0	12.0
Muskogee, Ok.	15.0	18.0	3.0	9.0
Okla. City	13.0	14.0	3.0	9.0
Tulsa	13.0	14.0	3.0	9.0
Ft. Smith, Ark.	14.0	17.0	3.0	12.0
Little Rock	16.0	16.0	5.0	12.0

*The following is the schedule of discounts on quantity gasoline sales adopted by the Magnolia Petroleum Co. in Oklahoma: Over 750 gallons a month, one-half cent; over 2,000 gallons, three-quarters cent; over 3,000 gallons, 1 cent; over 4,500 gallons, 1¼ cents; over 6,000 gallons, 1½ cents; over 8,000 gallons, 1¾ cents; over 10,000 gallons, 2 cents. If the quantity bought during the year is 12 times the monthly agreed purchases, the discount will be paid or credited on the entire quantity for the year less any monthly purchases.

The schedule on service station deliveries is: Over 200 gallons a month, 1 cent; over 300 gallons a month, 1½ cents; over 400 gallons, 1½ cents; over 500 gallons a month, 1¾ cents; over 600 gallons, 2 cents. The same rule applies for annual purchases in the tank wagon discounts.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
*N. Orleans, La.	15.5	17.5	3.0	14.0
Baton Rouge	14.0	17.0	2.0	12.5
Alexandria	15.0	18.0	2.0	14.0
LaFayette	15.0	18.0	2.0	13.5
Lake Charles	15.5	18.5	2.0	14.0
Shreveport	15.5	18.5	2.0	13.0
Kn'xville, Tnn.	19.5	22.5	3.0	15.0
Memphis	16.5	16.5	3.0	14.0
Chattanooga	19.5	22.5	3.0	15.0
Nashville	18.0	21.0	3.0	15.0
Bristol	19.0	22.0	3.0	14.0
Lit. Rock, Ark.	16.0	16.0	5.0	12.0

*Tax of 3 cents includes city tax of 1 cent.
*Louisiana kerosene prices include 1-cent state tax and 1-cent parish tax.

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
Atlanta, Ga.	14.0	16.0	4.0	15.5
Augusta	19.0	22.0	4.0	16.5
Macon	19.0	22.0	4.0	16.5
Savannah	17.0	19.0	4.0	14.5
Birm'h'm, Ala.	18.0	21.0	4.0	15.5
Mobile	17.0	20.0	4.0	15.0
Montgomery	19.0	22.0	5.0	16.5
Clarks'le, Miss.	17.0	20.0	4.0	12.5
Jackson	17.0	20.0	4.0	13.5
Natchez	16.5	19.5	4.0	14.0
Gulfport	18.5	21.5	6.0	14.0
Vicksburg	16.5	19.5	4.0	14.0
Jack'ville, Fla.	18.0	21.0	5.0	14.0
Miami	20.0	23.0	5.0	15.5
Pensacola	19.0	22.0	5.0	14.0
Tampa	18.0	21.0	5.0	14.0
Lexington, Ky.	18.0	21.0	5.0	15.5
Covington, Ky.	19.0	22.0	5.0	15.5
Louisville	19.0	22.0	5.0	15.0

In addition to the state tax of 2 cents on gasoline, Montgomery has city tax of 1 cent on gasoline. Kerosene prices in Georgia includes 1 cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene only. Pensacola tax includes 1 cent city levy. Gulfport tax includes privilege tax of 2 cents in addition to state tax.

PENNSYLVANIA-DELAWARE AND PART NEW ENGLAND

Atlantic Refining Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
Pittsburgh, Pa.	16.0	*22.0	...	14.0
Philadelphia	14.0	17.0	...	14.0
Scranton	16.0	*22.0	...	14.0
Allentown	16.0	*22.0	...	14.0
Altoona	16.0	*22.0	...	14.0
Erie	14.0	*18.0	...	14.0
Dover, Del.	19.0	22.0	3.0	14.0
Wilmington	19.0	22.0	3.0	14.0
Spring'd, Mass.	17.0	17.0	...	15.0
Worchester	17.0	17.0	...	15.0
Boston	17.0	17.0	...	15.0
Providence, R.I.	19.0	19.0	2.0	15.0
Hartford, Conn.	21.0	22.0	2.0	15.0
New Haven	21.0	22.0	2.0	15.0

*Includes tax of 3.0 cents. Pennsylvania tax is collected by the dealer and paid by him direct to the state.

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
Albany, N. Y.	17.0	19.0	...	15.0
*New York	17.0	19.0	...	15.0
Buffalo	17.0	19.0	...	14.0
Rochester	13.0	16.0	...	14.0
Syracuse	17.0	19.0	...	15.0
Boston, Mass.	17.0	19.0	...	15.0
Augusta, Me.	20.0	22.0	3.0	15.0
M'nch't'r, N.H.	18.0	22.0	3.0	15.0
Burlington, Vt.	20.0	22.0	3.0	15.0

*Price in steel barrels.

PACIFIC COAST DISTRICT

Standard Oil Co. (California)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
San Francisco	17.0	21.0	3.0	15.5
Pueblo	18.0	18.0	3.0	15.5
Los Angeles	16.5	20.5	3.0	15.5
Reno, Nev.	22.0	26.0	4.0	19.0
Portland, Ore.	17.5	21.5	3.0	16.5
Seattle, Wash.	16.5	20.5	3.0	16.5
Tacoma	16.5	20.5	3.0	16.5
Spokane	20.5	24.5	3.0	20.5
Phoenix, Ariz.	22.0	26.0	3.0	20.5

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
Atlantic City	18.0	20.0	2.0	14.0
Newark, N. J.	18.0	20.0	2.0	14.0
Annapolis, Md.	20.0	23.0	4.0	12.0
Baltimore	20.0	23.0	4.0	10.0
Cumberland	20.0	23.0	4.0	14.0
Washington	18.0	21.0	2.0	12.0
Danville, Va.	20.5	....	4.5	14.0
Norfolk	20.5	23.5	4.5	12.0
Petersburg	20.5	23.5	4.5	14.0
Roanoke	20.5	23.5	4.5	14.0
Richmond	18.5	21.5	4.5	14.0
Ch'rist'n, W.Va.	20.0	23.0	4.0	14.0
Keyser	20.0	....	4.0	14.0
Parkersburg	17.0	20.0	4.0	14.0
Wheeling	20.0	23.0	4.0	14.0
Charlotte, N. C.	20.0	23.0	4.0	14.0
Hickory	20.0	23.0	4.0	14.0
Mt. Airy	20.0	23.0	4.0	14.0
Salisbury	20.0	23.0	4.0	14.0
Charl'stn, S. C.	20.0	23.0	5.0	14.0
Columbia	20.0	20.0	5.0	14.0

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
Omaha	14.25	16.26	2.0	12.25
McCook	14.75	14.75	2.0	11.00
Norfolk	16.75	18.75	2.0	12.75
N. Platte	17.75	19.75	2.0	13.50
Scottsbluff	17.25	19.25	2.0	13.00

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'd's tax of	tank wagon
Denver, Colo.	16.0	16.0	3.0	12.5
Pueblo	15.0	15.0	3.0	14.5
Grand Jnctn.	20.0	22.5	3.0	18.0
Casper, Wyo.	17.0	19.0	3.0	13.0
Cheyenne	18.0	20.0	3.0	14.5
Butte, Mont.	22.0	22.0	3.0	19.0
Helena	22.5	24.5	3.0	19.0
Salt Lake, Utah	21.0	23.0	3.5	17.0
Boise, Idaho	23.5	25.5	4.0	19.0
Twin Falls	23.5	25.5	4.0	19.0
Albu'que, N. M.	21.0	24.0	5.0	17.0

CRUDE CHANGES

November 16—Humble Oil & Refining Co. posted new prices on all Mid-Continent crude purchased by that company below 28 gravity. The new prices are as follows: 27 to 27.9 gravity, $1.10; 26 to 26.9 gravity, $1.08; 25 to 25.9 gravity, $1.06, and all oil below 25 gravity, 90 cents per barrel.

November 18—Louisiana Oil & Refining Corp. reduced Urania, La., crude 15 cents per barrel, making the new price 75 cents.

November 19—Louisiana Oil & Refining Corp. reduced Smackover, Ark., light crude 15 cents to $1 per barrel and the Smackover heavy 5 cents to 85 cents per barrel. This cut was met by the Standard Oil Co. of Louisiana, the Magnolia Petroleum Co., the Atlantic Oil Producing Co., the Gulf Refining Co. and others on November 21.

TANK WAGON CHANGES

November 10—Standard Oil Co. of Kentucky reduced the gasoline tank wagon and station prices 2 cents in Atlanta, Ga., making the new prices 14 cents and 16 cents, respectively. The Standard Oil Co. of Louisiana increased the gasoline station price at New Orleans 2 cents, making the new price 17½ cents.

CALIFORNIA MARKETS ARE HOLDING STEADY

LOS ANGELES, Calif., Nov. 21.—The California oil market in general is holding steady. The most noteworthy development has been a noticeable strengthening in domestic motor gasoline. Two or three weeks ago several smaller marketers were hard pressed to move gasoline stocks and were offering to sell at from 7 to 7¼ cents, and in some cases as low as 6½ cents. This situation seems to have cleared up entirely, with most of these smaller refiners finding their sales ahead of their production. The market is again firm at 8 to 8½ cents which has been the prevailing price during the past two or three weeks. The lower prices in most cases were brought about by distress sales only. With the demand for motor gasoline holding up very well, marketers are more optimistic as to maintaining presenet prices in spite of the recent disorders east of the Rockies.

There has been a slight stiffening in export gasoline, prices moving up fractionally. While the volumes moving are not as great, the demand is still satisfactory. Exports to the Atlantic Seaboard during the past week took a big jump, being over twice as much as the previous week. Over 500,000 bbls. of petroleum products were taken. Atlantic foreign shipments, however, decreased.

Fuel oil is showing strength. Not only is the demand good locally, but large volumes are being exported both to Pacific foreign ports and in the Atlantic trace. Expectations are that fuel oil will continue relatively strong.

The lubricating oil market is apparently in the doldrums. No improvement is in sight.

URANIA COMPANIES MERGED

SHREVEPORT, La., Nov. 21.—Pima Petroleum Co., Arizola Petroleum Co., and Catalina Petroleum Co., all operating in the Urania Field of LaSalle Parish and owned practically by the same interests, have been merged into the Pima Consolidated Petroleum Co., with offices at Urania and Shreveport, La. J. Earl Freeman is general manager of the merged companies, with offices at Shreveport, and W. R. Ford will be in charge of the Urania office. The theree companies hold considerable production in Urania and have another well nearing completion.

CRUDE OIL PRICES

(Continued from Page 131)

(Continued from Page 141)

Artesia (March 12)	1.00
Hogback (N. Mex.) (March 14)	1.38

Note: Salt Creek, Osage, Cat Creek, Greybull and Hogback posted by Midwest Refining Co., and the remainder by the Ohio Oil Co. Both companies post Grass Creek light and Elk Basin.

EASTERN STATES

Joseph Seep Purchasing Agency
(Effective August 1)

Penna Grade Oil in New York Transit Line (New York)	$2.65
Bradford District Oil in National Transit Lines (Pennsylvania)	2.65
Penna Grade Oil in National Transit Lines (Pennsylvania)	2.55
Penna Crude Oil in Southwest Pennsylvania Lines (West Virginia)	2.55
Penna Grade Oil in Eureka Pipe Line lines (Pennsylvania)	2.50
Penna Grade Oil in Buckeye Pipe Line lines (Ohio) (August 23)	2.25
Cabell Grade Oil in Eureka Pipe Line lines (West Virginia) (March 16)	1.40
Corning 35-cent grade oil in Buckeye Pipe Line Co.'s line (March 17)	1.35
Corning 25-cent grade oil in Buckeye Pipe Line Co.'s lines (March 17)	1.45
Somerset Oil in Cumberland Pipe Line lines (Kentucky) (March 16)	1.50
Ragland Grade Oil in Cumberland Pipe Line lines (Kentucky)	.95
Keister (Pennsylvania)	1.10

MIDDLE WESTERN STATES

Ohio Oil Co.
(Effective March 14)

Lima	$1.71
Wooster	1.57
**Saginaw, Mich., Saginaw Sand (May 27)	2.05
Illinois	1.60
Indiana	1.48
Princeton	1.60
Plymouth	1.33
Waterloo (Nov. 17, 1926)	1.35
*Western Kentucky	1.33
**Saginaw, Mich., Berea Sand (May 27)	1.95
†Cumberland, Barren, Clinton and Monroe Counties, Kentucky (March 16)	1.50
‡Oil in lines of Stoll Oil Refining Co. in Oil City, Ky. (March 16, 1927)	1.50
†Clay County, Tennessee (Nov. 18)	2.35
§Oil Springs (Canada)	2.18
§Petrolia (Canada)	2.11

*Posted by Ohio Oil Co.
†Posted by Paragon Development Co.
‡Posted by Stoll Oil Refining Co.
§Posted by Imperial Oil Co., Ltd.
**Posted by Sun Oil Co.

MEXICAN CRUDE

Note—Due to the fact that the exportation of Tuxpam light crude oil his become a negligible factor, prices will no longer be published.

*Panuco heavy (f.o.b. Mex. ports)	$1.15

*17.496 cents tax.

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Only Trading Market in Oil Securities

Transcontinental at New High on Reports of New Wells. Apprehension Over West Texas Crude Price Structure

Transcontinental Oil featured the oil securities during the past week, when reports of phenomenal wells in the block which the company holds jointly with the Mid-Kansas Oil & Gas Co. reached the buying power. There was a heavy volume of trading in Transcontinental which placed it above 10 for the first time this year.

The remainder of the oils furnished a trading market exclusively, with great apprehension regarding the stability of the crude price market owing to West Texas.

At this time it seems that the shorts have covered very well, but real buying power seems absent in any but the strongest stocks.

Transcontinental Oil Co.'s advance was coincident with reports that a pipe line was to be built by the company from the Yates Pool of Pecos County, West Texas, to the Gulf Coast, thus giving the company a greater outlet for its big potential oil production in that pool. It was reported negotiations are under way for financing the pipe line.

New Oil Companies

The capitalization of oil companies organized under the laws of various states during October amounted to $20,015,000, according to compilations made by the Journal of Commerce. This capitalization compares with $89,060,000 in the corresponding month a year ago. Figures by years from 1918 to 1926, inclusive, follows: 1918, $2,134,547,000; 1919, $3,786,006,000; 1920, $3,786,814,000; 1921, $1,255,657,000; 1922, $1,157,972,000; 1923, $962,403,840; 1924, $787,031,000; 1925, $1,890,726,000; 1926, $1,562,396,000.

American Natural Gas

G. L. Ohstrom & Co., Inc., are offering at $99.50 a share and accrued dividends, to yield over 7 per cent, 50,000 shares of American Natural Gas Corp. $7 cumulative convertible preferred stock, without par value. Subject to prior redemption at $110 a share and accrued dividends, each share of this issue is convertible into five shares of corporation's common stock up to and including February 1, 1930, and at specified conversion terms thereafter up to and including February 1, 1945.

Application will be made to list this preferred stock on the New York stock Exchange.

For the year ended August 31, 1927, the consolidated gross revenues of the American Natural Gas Corp.'s subsidiaries, including those under contract of purchase, were $11,090,572, against $8,771,346 for the calendar year 1926. After all deductions, including estimated federal income tax, the balance available for dividends was $1,658,931, compared with annual dividend requirements of $350,000 on this issue of preferred stock. These earnings do not reflect any revenue from the Texas properties whose pipe line is now operating, nor any increase in earnings due to consolidation and improvements of the Kansas properties now being effected.

The American Natural Gas Corp.'s consolidated balance sheet as of August 31, 1927, after giving effect to the acquisition of properties and proposed financing incident thereto, showed total assets of $45,151,443. Current assets amounted to $2,206,821 as against current liabilities of $858,804.

Margay Oil

The Margay Oil Corp. reports for the eight months ended August 31, 1927, profit of $487,593 after charges, depreciation, depletion and cost of development and drilling but before federal taxes.

The income account for the eight months ended August 31, 1927, follows: Total revenue, $758,521; expenses, $138,913; net, $619,608; other income, $215,738; total income, $835,346; charges, $111,078; depreciation, depletion and cost of development and drilling, $236,675; profit before federal taxes, $487,593.

The balance sheet as of August 31, 1927, shows total assets of $3,458,223; current assets including $447,218 cash and call loans, $896,705; current liabilities, $223,973, and capital and surplus represented by 149,758 no par shares, $2,009,846.

Simms Petroleum

The net profit of the Simms Petroleum Co. and subsidiaries for the quarter ended September 30 1,927, was $234,200 after interest, drilling costs, depreciation and depletion, equivalent to 34 cents a share (par $10) earned on 689,789 shares of stock. For the nine months ended September 30, 1927, net profit amounted to $22,591 after the above charges, or 3 cents a share, against $653,765 or 95 cents a share, in the same period of the preceding year.

Swan-Finch Oil

At the annual meeting of the Swan-Finch Oil Corp., stockholders approved the proposal permitting the retirement of any part of the 7 per cent preferred stock. Previously the issue was callable only as a whole. Approval of the plan permits the gradual retirement of the preferred stock, of which $150,500, par $25, is outstanding.

Transcontinental Oil

The Transcontinental Oil Co. reports for the quarter ended September 30, 1927, net loss of $224,037 after interest, depreciation, depletion, etc., comparing with net loss of $75,093 in the preceding quarter and profit of $1,457,790 before federal taxes in the third quarter of 1926.

Net loss for the first nine months of 1927 amounted to $83,350 after the above charges, but before federal taxes, against profit of $1,846,632 in the first nine months of 1926. Stock outstanding consists of 157,500 shares of 7 per cent preferred of $100 par value and 3,742,029 no par value shares of common stock.

Dividends

The Chesebrough Manufacturing Co. has declared an extra dividend of $1.50 and regular quarterly dividend of $1 a share, both payable December 28 to stockholders of record December 10. The last extra dividend was 75 cents, paid December 28, 1926.

The Ohio Oil Co. has declared an extra dividend of 25 cents and regular quarterly dividend of 50 cents, payable December 15 to stockholders of record November 21. This is the same rate as declared in the two preceding quarters.

The National Transit Co. has declared a quarterly dividend of 25 cents a share on the capital stock, payable December 15 to stockholders of record November 30.

The Shell Transport & Trading Co. has declared an interim dividend of 2 shillings on the ordinary shares, free of tax, payable January 5. On July 6 this year a final dividend of 3 shillings was paid and on January 5 this year an interim dividend of 2 shillings was paid.

The Royal Dutch Co. has declared an interim dividend of 10 per cent payable January 5. This is the same as a year ago.

Vacuum Oil

Vacuum Oil Co. has advanced sharply to new high levels as a result of the company's increased earning power and larger dividends resulting. The stock has been selling at too high a yield in view of the apparent ability of the company to continue dividends on the present basis. In other words, the price of the stock has adjusted itself to a permanently higher rate of earnings. Reports are also current of a stock dividend.

National Supply

The net income of Natural Supply Co. of Delaware and subsidiaries for the nine months ended September 30, 1927, was $2,094,340 after charges and federal taxes, equivalent after allowing for dividend requirements on the 7 per cent preferred stock, to $6.47 a share (par $50) earned on 265,900 shares of common stock. This compares with $3,157,969 or $10.47 a share in the first nine months of 1926.

For the quarter ended September 30, 1927, net income was $369,322 after the above charges, equal to 92 cents a share on the common, comparing with $400,531 or $1.04 a share in the preceding quarter and $1,462,509 or $5.03 a share in the third quarter of the previous year.

The consolidated income account of the Natural Supply Co. of Delaware and subsidiaries for the nine months ended September 30, 1927, compares with the same period of 1926 as follows:

	1927	1926
Gross	$1,611,098	$3,055,713
Expenses	1,187,868	1,219,282
Net earnings	$ 423,230	$1,836,431
Other income	74,233	136,719
Total income	$3,193,714	$4,555,557
Federal taxes	409,359	577,209
Other deductions	690,015	820,379
Net income	$2,094,340	$3,157,969

The consolidated balance sheet of the National Supply Co. and subsidiaries as of September 30, 1927, compares as follows:

Assets	1927	1926
*Land, buildings, machinery, etc	$6,899,430	$7,011,913
Investments	273,020	319,626
Cash	2,333,310	1,991,506
Call loans	3,750,000	2,000,000
Short term investment		1,540,960
Notes receivable	2,744,068	2,355,355
Accounts receivable	9,704,718	11,147,924
Merchandise	13,969,815	12,984,669
Definite charges	32,396	74,008
Total	$39,706,757	$39,425,961
Liabilities		
Preferred stock	$ 7,095,100	$ 7,095,100
Common stock (par $50)	13,295,000	13,295,000
Accounts payable	2,174,601	3,749,771
Accrued taxes, wages, etc	210,636	253,219
Accrued federal taxes	613,247	542,370
Insurance and pension res.	1,015,486	609,116
Surplus	15,302,687	13,881,395
Total	$39,706,757	$39,425,961

*After depreciation.

J. D. FLUREY DIES

TOLEDO, Ohio, Nov. 19.—John D. Flurey, 88, a veteran of the oil business, is dead here. He spent many years in the Pennsylvania oil fields before coming to Toledo 25 years ago to become connected with the Sun Oil Co.

NEW YORK STOCK EXCHANGE—LIST OF ACTIVE STOCKS

Stocks—	Par	Clos. Quot. Nov. 21	Nov. 14	1927 High	1927 Low	1926 High	1926 Low	1925 High	1925 Low
Amerada Corp.	..	29⅝	29¼	37⅛	27⅝	32⅞	24⅝	..	..
Atlantic Refining, com.	100	$114¾	118	131¾	107	128⅜	97	117½	95½
Barnsdall "A"	25	26⅜	24⅜	35½	20⅜	32½	23½	33½	18⅜
California Petroleum, com.	25	23	23½	32⅞	20	38¼	30⅞	34⅜	23⅜
Houston Oil	100	158¼	164	177⅜	60¼	75	50¼	85	50
Independent Oil & Gas	..	25¼	26½	32⅜	17⅝	34	20¼	41⅜	13½
Louisiana Oil	10	10⅝	10⅜	18⅛	10½	19⅝	12	23⅜	13⅜
Maracaibo	..	12½	12¼	22⅜	12	27⅜	18⅜	35½	20⅜
Marland	..	35⅞	36⅛	58⅛	31	63⅜	41¼	60⅛	31⅝
Mid-Continent Petroleum	..	28½	28⅞	39⅜	25½	41	25⅝	38	25⅜
National Supply	50	91	91	95¾	76	84⅞	55½	71	54¾
Oil Well Supply	25	33¼	33	44⅜	31½	36	30	38	33⅜
Pan American, B	50	51¼	49⅜	66⅜	45⅛	72⅜	56⅛	83⅞	59½
Pan American, Western B	..	20	21½	37⅞	16¾	46	34	94⅝	37¼
Phillips Petroleum	..	42½	42⅜	60½	36⅜	54⅞	42¼	47¼	37¼
Producers & Refiners	50	26¼	28	33⅞	16¾	26	11	32⅜	12½
Pure Oil, com.	..	26	26	33½	25	31	25⅜	33⅜	32½
Royal Dutch, N. Y., sh.	13.40	48½	47¼	54⅛	44¼	57⅜	49⅜	57⅜	48¼
Shell Transport	10	43¼	42⅜	49	41½	48⅞	42	49	30⅜
Shell Union, com.	..	27	26⅞	31⅜	24⅝	30⅞	24	28⅜	21⅝
Simms Petroleum	10	19⅝	19⅜	22⅜	14¼	25⅜	16½	28½	18⅜
Sinclair Consolidated	..	16⅜	15⅝	22⅜	15⅛	24⅞	16⅜	24⅞	17
Skelly Oil	25	27½	27⅞	37⅜	24⅛	37⅛	27	32½	21⅜
Standard of California	25	56⅛	56	60⅜	50⅝	63½	54	67¼	52½
Standard of New Jersey, com.	25	40½	40⅛	41⅝	35⅞	46⅝	37½	47½	38⅝
Standard of New York	25	32⅛	32⅛	34⅛	29⅜	47¼	30⅝	48⅝	40
Sun Oil Co.	..	33	32½	34⅞	30	41¼	30⅛	43⅞	38½
The Texas Company	25	53¼	52⅜	58	45	58	48	55	43⅜
Texas Pacific Coal & Oil	10	13¾	13½	18⅞	12	19½	12⅛	23¼	11
Tide Water Associated Oil	..	17	16⅝	19⅛	15⅝	21	17	..	..
Transcontinental	..	9⅜	8⅝	10⅝	3⅜	5⅛	3	5⅜	3½
Union Oil of California	25	44⅝	45	56½	39⅝	53⅜	37¼	43⅝	38½
Union Tank, com.	100	118	120⅞	120⅞	94	120⅝	84¼	134	118
White Eagle Oil & Refining	..	23	22⅞	27½	21⅜	29⅝	25⅛	28⅜	25⅝
Standard Oils									
Anglo-American Oil	£1	19⅜	18⅜	21⅝	17⅛	19⅜	16½	26⅜	17½
Borne Scrymser	25	57	56	69	49⅛	75	65	‡240	205
Buckeye Pipe Line	50	59	57½	59	45	59½	42	72	63½
Chesebrough Manufacturing Co.	25	119	122	126	76⅛	81⅛	63	74	48¼
Continental	10	18¾	18¼	22⅝	16¼	25⅞	10¼	31⅛	21⅞
Cumberland Pipe Line	100	94	95	‡137	90	137	102	156	128
Eureka Pipe Line	100	65	65⅝	65	47	43⅝	43	96	61¼
Galena Signal, com.	100	7¼	7	13½	7⅛	32½	9⅞	68½	23½
Humble Oil & Refining Co.	25	66⅝	64½	66⅜	54	99⅝	52	99	40½
Illinois Pipe Line	100	176	174½	176¼	123⅜	144	131	154½	124
Imperial Oil	..	60¼	60½	64⅜	37⅜	39⅜	32½	39¼	27¼
Indiana Pipe Line	50	89	89	89	61	68	52¼	84	57⅜
International Petroleum Co.	10	32⅜	33½	34⅞	28¼	35¼	28⅜	25⅜	20¼
National Transit Co.	12.50	22⅞	22	22⅞	13⅛	30⅝	27½	25½	16½
New York Transit	100	42	38	42	31⅛	61½	27¼	70	50
Northern Pipe Line	100	95	91	95	70	80½	64	88	67½
Ohio Oil Co.	25	66⅝	62½	66⅝	52	67⅝	55⅜	75¼	60
Penn-Mex Fuel	25	32	35	36⅞	12	24¼	15	44	19
Prairie Oil & Gas	25	50⅜	50	55½	45⅝	60¼	49	65½	45⅞
Prairie Pipe Line	100	186⅜	189¼	189¼	132	137½	122½	129⅜	105
Solar Refining Co.	100	190	180	‡201½	178	212	184½	259	200
South Penn Oil	25	39	38	41½	34½	50	30	‡197	139
Southwest Pa. Pipe	100	77	74	77	55½	56	47½	84	50
Southern Pipe Line	50	39	38	39	18½	27	34	‡103	63
Standard of Indiana	25	80¼	$76¼	80¼	64⅝	70½	60½	70⅜	69¼
Standard of Kansas	25	16½	16¼	20⅞	15⅜	36½	16½	45	30
Standard of Kentucky	25	125	122⅜	125	111½	134⅜	108	137	114⅜
Standard of Nebraska	25	44	43	49½	43	51⅛	42	‡270	231
Standard of Ohio, com.	100	78½	75	81½	72	362	192½	369	338
Swan & Finch, com.	25	19	19	21	14½	21	18	27	12
Vacuum Oil	25	147	143	147	95½	109⅜	94⅛	109½	80½
Miscellaneous									
Gulf Oil Corp. of Pa.	25	104⅞	95⅞	96½	86¼	95	82½	98¼	63½

*Bid, no sales. ‡Old stock. †New stock. §Ex-dividend.

Quotations furnished by W. J. Wollman & Co.

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange was as follows:

Nov. 21	63.66	Oct. 17	59.22	Sept. 12	61.20
Nov. 14	62.78	Oct. 10	59.20	Sept. 5	60.60
Nov. 7	61.30	Oct. 3	60.97	Aug. 29	60.41
Oct. 31	60.98	Sept. 26	61.30	Aug. 22	61.58
Oct. 24	60.45	Sept. 19	60.83	Aug. 15	61.05

OKLAHOMA FIELDS

(Continued from Page 48)

CEL SE SW Section 16-12-15, has been shut in for 500,000 feet of gas in sand at 664-68 feet.

Muskogee County

Hillside Oil & Gas Co. has the rig up for No. 10 C. Sango, C SW SW Section 28-15-15. J. L. Slusher and others' No. 1 G. Fewel, CWL SW NW Section 6-14-17, is drilling at 300 feet. J. W. Hale and others moved the machine to the location for No. 1 McDaniel, NW cor. SW SE Section 6-14-19. E. J. Lambert's No. 2 Grayson, NE cor. SE Section 22-13-15, is spudding.

Sunray Oil Corp.'s No. 1 Hicks, NE cor. SW Section 5-14-19, has been abandoned at 701 feet. J. W. Hale and others' No. 1 Kell, NE cor. NW NE NW Section 7-14-19, is dry and abandoned at 959 feet.

Okfuskee County

Mid-Continent Petroleum Corp. has the rig on the ground for No. 1 Morris, NE cor. SW NW Section 29-10-9.

Okmulgee County

J. E. Wallace's No. 4 D. Colbert, NE cor. SW SE Section 14-14-14, is drilling at 1,000 feet. Independent Oil & Gas Co. and others moved a machine to the location for No. 5 Wilson, SE cor. NW SE Section 7-12-12.

Kirkland & Son's No. 7 Bell, NW cor. SE NW Section 17-15-13, was shot with 100 quarts in sand at 1,384-1,430 feet and made 10 bbls. W. B. Pine's No. 2 Skidmore, CEL SE NW Section 10-15-14, was completed for 15 bbls. after shooting sand at 970-96 feet. Hutchinson & Becker's No. 4 Doyle, SW cor. SE NW Section 6-14-13, is making 8 bbls. from sand at 2,108-40 feet. J. W. Sharpe and others' No. 4 Colbert, CWL NE NW Section 16-14-14, is making 18 bbls. from sand at 1,252-70 feet. Lakeside Oil & Gas Co.'s No. 1 Voorhies, SE cor. NW SW Section 26-13-11, has been abandoned at 2,500 feet in Dutcher sand. E. J. Lambert's No. 2 Sango, C S half NE SW Section 21-13-15, was completed for 150,000 feet of gas in sand at 1,600-98 feet, total depth 1,753 feet. Bison Oil & Gas Co.'s No. 2 Burgess, NE cor. SE NE Section 19-12-13, made 30 bbls. after a shot in sand at 2,126-31 feet, total depth 2,230 feet.

Pottawatomie County

Independent Oil & Gas Co. and Darby Petroleum Co.'s rig is being built for No. 8 Knapp, SE cor. NW NE Section 8-9-5, Earlsboro Pool. Indian Territory Illuminating Oil Co. made location for No. 1 Sullivan, SW cor. NW SE Section 25-7-3. Amerada Petroleum Corp. staked location for No. 1 Neghnguit, SE cor. NW Section 19-7-4, Pearson Pool. Twin State Oil Co. is erecting the rig for No. 4 Spangy, NW cor. SE Section 19-7-4. Mid-Continent Petroleum Corp. has the rig on the ground for No. 1 Smith, NW cor. SE Section 25-7-4. Magnolia Petroleum Corp. made location for No. 2 Harper, SE cor. NW NE Section 19-7-5, Maud area.

Magnolia Petroleum Corp.'s No. 5 Bryant, NW cor. SE NW Section 9-9-5, Earlsboro Pool, made 120 bbls. on the swab from the Wilcox sand at 4,315-27 feet. Barnsdall Oil Co.'s No. 8 Gibson, SW cor. NW NE Section 9-9-5, had Wilcox sand at 4,360-74 feet and made 45 bbls. Continental Oil Co.'s No. 3 Doyle, NE cor. SW Section 19-7-4, Pearson Pool, topped the Hunton lime at 3,692 feet, drilled in to 3,762 feet and made 1,130 bbls. initial.

Sequoyah County

Hunt and others' rig is on the ground for No. 1 Ralph, SE cor. NW SW Section 12-12-23.

Seminole County

The Prairie Oil & Gas Co. is building the rig for No. 1 Lumley, SW cor. NW SE Section 1-10-5. Magnolia Petroleum Co. is building the rig for No. 1 Hyde, NW cor. SE NW Section 13-9-5, Earlsboro Pool. No. 3 Hammond, SW cor. NW NE Section 10-8-6, Bowlegs Pool, is drilling at 400 feet. Twin State Oil Co.'s rig is being built for No. 3 Jones, SE cor. NE SE, Section 11-8-6. Mid-Continent Petroleum Corp. is erecting the rig for No. 8 Smith, NW cor. SW SW Section 12-8-6. Indian Territory Illuminating Oil Co. has the cellar dug for No. 6 Davis, NW cor. SE SW Section 13-8-6. Sinclair Oil & Gas Co. and Darby Petroleum Corp. are moving the rig in for No. 1 Johnson, NW cor. SW Section 5-7-7. Gypsy Oil Co. is putting up the rig for No. 1 Cecil, SW cor. NE Section 19-7-7.

Gypsy Oil Co.'s No. 4 Sango, SW cor. NW SE Section 1-9-5, Earlsboro Pool, had an initial production of 1,085 bbls. from the Wilcox sand at 4,398-4,404 feet. The Texas Company's No. 1 Anderson, NE cor. SE SE Section 2-9-5, went into the Wilcox sand at 4,392 feet, drilled to 4,404 feet and plugged back 5 feet and swabbed 225 bbls. Carter Oil Co.'s No. 4 Paine, SW cor. NW SE Section 12-9-5, had the Wilcox sand at 4,300-08 feet and made 230 bbls. Magnolia Petroleum Co.'s No. 3 Dixon, NE cor. SE SW Section 12-9-5, topped the Wilcox sand at 4,350 feet, drilled to 4,488 feet and was abandoned. Empire Gas & Fuel Co.'s No. 1 Karr, NW cor. SW Section 34-9-5, has been abandoned at 5,028 feet.

Amerada Petroleum Corp.'s No. 2 Strothers, SE cor. NW NE Section 3-9-6, Searight Pool, was completed for 627 bbls. in the Wilcox sand at 4,325-35 feet. Wilcox Oil & Gas Co.'s No. 7 Cluck, NW cor. NE NW Section 4-9-6, made 1,014 bbls. from the Wilcox sand at 4,441-42 feet. Pure Oil Co.'s No. 8 Strothers "B," SE cor. NW NW Section 36-9-6, is dry and abandoned at 4,130 feet in the Wilcox sand found at 4,115 feet. Carter Oil Co.'s No. 1 Melisa, SE cor. NE SW Section 9-8-6, Bowlegs Pool, swabbed 1,335 bbls. from the Wilcox sand found at 4,225 feet and drilled to 4,229 feet. Mid-Continent Petroleum Corp.'s No. 4 Smith, SE cor. SW SW Section 12-8-6, made 400 bbls. from the Wilcox sand at 4,199-4,215 feet.

Indian Territory Illuminating Oil Co.'s No. 3 Davis, SW cor. SE SW Section 13-8-6, lost the hole at 4,258 feet and was abandoned. No. 1 Fay, SW cor. NW SW Section 13-8-6, went into the Wilcox sand at 4,356 feet, drilled to 4,367 feet and made 759 bbls. Carter Oil Co.'s No. 3 Bowlegs, SW cor. SE SW Section 15-8-6, has been abandoned at 4,220 feet in the Wilcox sand found at 4,155 feet, having lost the hole. Indian Territory Illuminating Oil Co.'s No. 8 Goforth, NE cor. NW NE Section 15-8-6, had to be abandoned on account of losing the hole at 3,600 feet.

Continental Oil Co.'s No. 1 Cosar, SE cor. NW Section 36-8-6, Little River Pool, made an initial production of 600 bbls. from the Wilcox sand at 4,473-77 feet. Mid-Continent Petroleum Corp.'s No. 6 Wadsworth, NW cor. SE SW Section 36-8-6, made 1,950 bbls. from the Wilcox sand at 4,124-36 feet. Indian Territory Illuminating Oil Co.'s No. 2 Phoebe "B," SW cor. NE SW Section 36-8-6, had Wilcox sand at 4,210-18 feet and made 805 bbls. No. 3 Phoebe "B," NE cor. SW Section 36-8-6, swabbed 721 bbls. from Wilcox sand at 4,441-44 feet. Gypsy Oil Co.'s No. 1 Wadsworth, NW cor. SE Section 1-7-6, found the Wilcox sand at 4,250 feet and made 30 bbls. when drilled in to 4,255 feet.

Indian Territory Illuminating Oil Co.'s No. 2 McCulla, NW cor. SE NW Section 1-7-6, produced 622 bbls. from the Wilcox sand at 4,139-49 feet. No. 3 Soketheche, SW cor. NW NE Section 1-7-6, flowed 1,088 bbls. from Wilcox sand at 4,222-27 feet. No. 4 Soketheche, SE cor. NW NE Section 1-7-6, has been abandoned at 4,615 feet in Wilcox sand. Roxana Petroleum Corp.'s No. 1 Smith, SW cor. NE NE Section 1-7-6, made 40 bbls. from Wilcox sand at 4,248-54 feet. The Texas Company's No. 1 Coker, NW cor. SW Section 1-7-6, is good for 255 bbls. in the Wilcox sand at 4,150-58 feet. No. 3 Coker, SE cor. NE SW Section 1-7-6, came in for 780 bbls. in the Wilcox sand 4,234-38 feet. Amerada Petroleum Corp.'s No. 4 Nitey, NW cor. SE NE Section 2-7-6, flowed 1,070 bbls. from Wilcox sand found at 4,311 feet and drilled to 4,319 feet.

The Prairie Oil & Gas Co.'s No. 2 Templeton, NW cor. SW SE Section 12-8-6, Bowlegs Pool, made 400 bbls. from the Wilcox sand at 4,435-44 feet. No. 3 Templeton, SE cor. SW SE Section 12-8-6, was completed for 915 bbls. in Wilcox sand at 4,262-81 feet.

Wagoner County

Peterson & Young's No. 1 Jameson, C NE SW Section 23-16-16, is spudding. Knox & Shouse's No. 1 Harris, C SW SE Section 12-17-16, is dry and abandoned at 817 feet.

SOUTHWEST WILDCATS

(Continued from Page 88)

west and 150 feet to northeast lines, is on top of Edwards at 2,345 feet.

Bee County

D. Hewitt's No. 1 Ray, 1½ miles north of Pettus, is shut down at 2,470 feet. Nichols & White's No. 1 Hicks, Block 19, NW cor., is standing at 1,408 feet. Red Ant Oil & Gas Co.'s No. 1 Perry & Chestnut, B. Q. Hadley Survey, 450 feet to east line and 1,600 feet to south line of farm, is drilling at 805 feet.

Caldwell County

Detex Oil Co.'s No. 1 Hardeman, standing at 3,075 feet. Martin & Wright's No. 1 Blackwell, 1 mile east of Burdette Wells, is standing at 26 feet. Ratcliffe's No. 1 New, James Hindes Survey, is shut down at 2,914 feet in Edwards. Sutton & Smith's No. 1 Carter, Green Hines Survey, 150 feet to CNL, is standing at 2,597 feet.

DeWitt County

Empire Southern Oil Co.'s No. 1 Thomas, Survey 3, a few miles west of Cuero, is resetting liner at 2,960 feet and test is showing little gas and some oil but sands up. McNeil & Matthews' No. 1 Toland, A. Dillard Survey, 150 feet to north and 300 feet to east line, is drilling below 600 feet. H. T. Roe's No. 1 Lienhard, D. J. Bibb Survey, is location in SW cor. Williams & Gates' No. 1 Gohmert, G. W. Brooks League, 175 feet to north and 300 feet to east line, is standing at 760 feet.

Dimmitt County

Humble Oil & Refining Co.'s No. 1 City National Bank, Survey 654, at 700 feet to north and 2,000 feet to east line, is drilling at 4,278 feet.

Frio County

Lain & Brown's No. 1 Edwards, Hooper & Wade Survey, 920 feet to CNL, is drilling at 1,040 feet. P. A. Neilan's No. 2 Blackhaller, James Gouley Survey, is drilling and has topped chalk.

Fayette County

E. A. Bainbridge has derrick lumber on ground for test in the Lewis & Toy leagues. E. A. Williams is making location for test southeast of La Grange.

Goliad County

C. W. Simpson's No. 1 Ideus, W. H. Pendleton Survey, 156 feet to north and 540 feet to west line, is making drill stem test at 2,107 feet.

Gonzales County

Green & Shall's No. 1 Dubose, G. McConnell Survey, 1,320 varas to southwest and 450 varas to northwest lines, is drilling at 1,800 feet. L. L. Jones and others' No. 1 Campbell, Moore & Bridges Survey, SW cor., at 1,733 feet cored gray sand with some gas, and has gas in breaks since 1,543 feet. Sterns & Gips' No. 2 Ramzinsky, Gonzales Survey, 1,120 feet to north and 725 feet to west line, has spudded in. L. P. Unkel's No. 1 Hampton, C. H. Jaeger Survey, is drilling below 900 feet. H. B. West, trustee's, No. 2 Preston, W. W. Pace One-Third League, P. R. Whitney Survey, is preparing to test at approximately 1,500 feet.

Guadalupe County

F. A. Lain's No. 1 Weinert, W. K. Estell Survey, 150 feet to CNL, is having trouble to get water to resume drilling at 3,004 feet. Eugene Sights' No. 1 Fred Kruger, Isaac Baker Survey, 450 feet to north and west lines, has derrick up and part of rig on ground.

Hays County

J. E. Rodgers' No. 1 Hohenburg, 2½ miles east of San Marcos, is drilling at 2,068 feet in hard rock.

Karnes County

Reynosa Oil Corp.'s No. 2 Butler, Block 43, at 1,000 feet south of No. 1, working on test at 1,947 feet.

Kerr County

Walker-Van Duyn's No. 1 Barfield, B. B. Peck Survey, 4,700 feet to north line and 450 feet to east line, is preparing to spud in.

Kinney County

Havelin Oil Co.'s No. 1 Weatherby, Section 26, Block 5, is drilling at 4,372 feet in sandy lime. Stephens and others' No. 1 Clamp, Survey 346, is standing at 1,070 feet and showing little gas.

LaSalle County

Sun Oil Co.'s No. 1 Washburn, Survey 157, is location 3,500 feet to north and 3,400 feet to west line, and is rigging up.

Lavaca County

M. L. Benedum's No. 1 Russek, John Linn One-Third League, J. G. Reynolds Survey, Block 38, is standing at 3,275 feet.

Live Oak County

Houston Oil Co.'s No. 20 Cartwright, M. Trudo Survey, is drilling at 1,113 feet; No. 21 Cartwright, J. M. Colchado Survey, has been spudded in. Morgan-Roxana corporation's No. 1 West estate, Survey 2, 1,300 feet to southwest and 900 feet to northeast lines, is shut down at 2,207 feet for orders with very slight show of gas at 1,761 feet. Simmons Oil Co.'s No. 3 Reagan is fishing; No. 2 Griff is drilling.

Medina County

F. Banderet's No. 1 Mofield, Survey 532, has derrick up and rig on ground.

Maverick County

Ryan Consolidated Petroleum Co.'s No. 1 Indio, Survey 14, is drilling at 2,410 feet. Rycade Oil Corp.'s No. 1 Chittim, Section 129, Block 7, is fishing at 4,295 feet; No. 2 Chittim, Section 158, Block 7, is drilling at 1,700 feet; No. 2 Sullivan is drilling at 5,132 feet.

San Patricio County

Houston Oil Co.'s No. 1 Baldwin, Roos Survey, Block 5, at 250 feet to west and 200 feet to south line, at 2,148 feet tested gas and is being completed; No. 1 Humble is ready to drill in; No. 3 Humble has derrick up in Block 7 of the Roos Survey. Mission Drilling Co.'s No. 1 Harwood is drilling at 2,800 feet; No. 1 Hunter is rigging up; No. 3 Cage is location. National Oil Co.'s No. 1 Sullivan, J. C. McMullen Survey, 500 feet to SW cor., is shut down at 1,135 feet while crew spuds in well in Duval County. George B. Pickett's No. 1 Garrett, Taft Survey, Block 23, is drilling at 3,010 feet; No. 1 Whitworth, NW NW Section 60, is drilling at 260 feet. Saxet Oil Co.'s No. 12 Rachal is drilling in at 2,312-16 feet; No. 1 Hunter is location; No. 9 Rachal is drilling at 1,450 feet; No. 7 Dunn, Rachal Survey, is location 150 feet to north and 811 feet to east line. John Sigmund's No. 9 Robinson, 350 feet southeast of No. 7, is drilling at 1,600 feet.

Travis County

Roy Clark and others' No. 1 Carl Jacobson, C. Harrison Survey, 500 feet to east line of farm, is drilling at 150 feet. T. P. Garrett's No. 1 Rowe, R. Hornsby Survey, is location 900 feet to north and east lines.

Uvalde County

Pure Oil Co.'s No. 1 J. D. Smythe, Survey 687, at 740 feet to north and 146 feet to east line, is drilling at 90 feet.

Victoria County

J. J. Elam's No. 1 Vol Kutchka, 200 feet to CNL of Section 40, is moving in machinery.

Val Verde County

Crusoe Williams' No. 1 Holman, Section 5, Block N, is shut down at 2,940 feet for casing. Douglas Oil Co.'s No. 1 Seller, Section 82, Block A, is drilling at 4,100 feet in hard lime. East Del Rio Oil Co.'s No. 1 Russell, Section 183, is fishing at 3,210 feet. Independent Operator's No. 1 Whitehead, SE SE Section 30, Block 4, is shut down at 3,925 feet. Magnolia Petroleum Co.'s No. 1 Whitehead, Survey 81, is drilling at 4,850 feet in lime. O. O. Owens and others' No. 1 Mills ranch, Section 128, Block 1, is drilling at 2,730 feet with 800,000 feet of gas.

Zavala County

J. G. Pundt's No. 1 West, Fuentes Survey, NW cor., is drilling at 1,100 feet. Western Gas & Fuel's No. 1 West, West ranch, northern part of county, is drilling at 400 feet.

Committees to Meet On Oil Legislation at Washington, Dec. 3

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Nov. 21.—The committee of nine representing the American Bar association for the consideration of legislative needs of the petroleum industry, will meet here on the morning of December 3, and will then announce the names of three of its members who will confer with members representing the American Petroleum Institute and the government.

In the afternoon of the same day there will be a meeting of this committee representing these three interests. Secretary Work has not yet indicated the three members he will appoint but probably one will represent the interior department, another the department of justice, and the third the federal trade commission. Secretary Work states that this committee of nine will at once proceed with its work. He says that several outstanding lawyers and individual producers have asked to appear before this committee to present their views which they wish to submit before the committee definitely commits itself upon any plan for legislaion.

FIRE EXTINGUISHED BY SHOT OF GELATIN

Fire at the Twin State Oil Co.'s well No. 1 Hearn in the Earlsboro area cost the life of Dave Hudson, farm boss, and destroyed about 21,000 bbls. of oil be-

sides the well equipment above ground. It was extinguished Sunday morning, November 20, after burning since the preceding Tuesday night, when a spark, caused supposedly by a short circuit or by friction, ignited the flowing oil. A shot of nitrogelatin by M. M. Kinley, expert in handling oil fires, and his assistants, T. F. Kinley and Frank Pease, extinguished the column of flame.

CONTRACT FOR WASKOM PLANT

SHREVEPORT, La., Nov. 21.—Contract has been awarded to C. F. Braun & Co. of Los Angeles, by the Moody-Seagraves interests for an absorption gasoline plant to cost approximately $125,000. The plant will be located at Waskom, Tex., in close proximity to the Waskom booster station of the Dixie Pipe Line Co.'s 22-inch Webster Parish-Waskom-Houston gas line and will have a gas capacity of 80,000,000 feet per day on which an average extraction of 15,000 gallons per day is figured. Construction is to begin at once so as to have the plant ready for operation by the time the pipe line is functioning, expected to be about December 15 or January 1.

VETERAN EMPLOYES OF UNION OIL CO. ARE AWARDED SERVICE PINS

Seven members of Union Oil Co. of California, including its president, W. L. Stewart, with an aggregate total of 202 years of service, were honor guests recently at a dinner in the home of Mr. Stewart, 790 San Gabriel Boulevard, Pasadena, Calif., to receive service pins.

The honor roll included besides Mr. Stewart, as host, W. W. Orcutt, vice president; Frank F. Hill, manager of field operations; Carl O. Dahlgren, wharfinger at Oleum refinery; G. L. Armstrong, pumper at Ventura; Capt. Albert Pelle, of the Tanker Santa Paula, and Edward J. Brown of the company's office at Oleum.

Mr. Stewart has been continuously associated with the Union for 33 years, although his first actual connection with the company began in 1889, the year before the Torrey Canyon, Sespe and Hardison and Stewart Oil companies were consolidated into the Union Oil Co. of California.

Union Oil Co. men with service of 25 years or more receive service pins. Left to right: Back row, G. L. Armstrong, pumper; F. F. Hill, manager of field operations; W. L. Stewart, president; W. W. Orcutt, vice president. Front row, Albert Pelle, master of tanker Santa Paula; Carl O. Dahlgren, wharfinger Oleum refinery; E. J. Brown, transfer agent, Oleum.

Frank F. Hill, with 28 years of service, is considered one of the most practical oil men on the Pacific Coast. Starting as a teamster in the Ventura Field, he has been associated with the development and production end of the industry.

Carl O. Dahlgren, wharfinger at Oleum, is a 32-year man. He was a member of the construction crew in the building of the Oleum refinery, and upon its completion went to work there.

W. W. Orcutt has to his credit 29 years of service with the company. Under his direction, Union Oil was the first on the coast to organize a geological department for research work and the discovery of new oil fields. The success of this department under Mr. Orcutt's direction in the application of scientific principles to the solving of problems in the oil fields has probably been one of the greatest factors in inducing California oil men to recognize the value of geological work.

G. L. Armstrong and Capt. Albert Pelle each have been affiliated with the Union for 27 years. Mr. Pelle's connection began as a deck hand on the ship Santa Paula. Mr. Armstrong as a pumper at Ventura, now fills the same position he held when he first started with the company.

Edward J. Brown received his 25-year service pin. He is cashier at Oleum refinery.

In presenting the service pins, Mr. Stewart reviewed briefly the history and growth of the company and paid tribute to the "old-timers" whose services have aided materially in the progress of Union Oil Co.

In addition to the honored guests there were present at the dinner, E. W. Clark, executive vice president; L. P. St. Clair, vice president; R. D. Matthews, comptroller; P. N. Boggs, assistant general manager; Chester W. Brown, director of exploration and production; Paul M. Gregg, counsel; John McPeak, secretary, and W. L. Stewart, Jr., secretary of the manufacturing committee.

WEAKNESS IN KEROSENE SHREVEPORT FEATURE

SHREVEPORT, La., Nov. 21.—Indications of weakness in the kerosene market with prospects of more of the product being available here during the next few weeks was the sole development of the week in the refined market situation in this territory. The only other feature was an inquiry for a half million gallons of the product reported by one refiner. Reductions over the week end in the posted price of Smackover crudes following a cut in the price at the well for Urania oil gave Shreveport refiners a ray of hope that they will be able to make a little money on fuel oil despite the general sluggishness of the market and its continued weakening. Prices were unchanged at 90 cents to $1 per barrel one concern reporting sales at $1.05 to $1.10. Gasolines, kerosene and gas oil were unchanged.

NEW PLANT CAN MAKE 3,600 BARRELS A DAY

A steel-barrel plant with a capacity of 3,600 bbls. in 24 hours—2½ bbls. a minute—is being completed by the Butler Manufacturing Co. of Kansas City, Mo., and Minneapolis, Minn., at its Kansas City quarters. The plant will cost about $100,000.

The estimate of production is based on 55-gallon barrels, which means that the company will be able to turn out 3,600 bbls. with a combined capacity of 198,000 gallons a day, or an average of $10,500 production. If smaller sizes of barrels are manufactured the number per hour can be increased proportionately. The different sizes to be made are 55, 50, 30 and 15-gallon.

New installations include welding equipment, seaming equipment, testing equipment and conveying equipment. A big machine is being installed that will automatically put both heads on a barrel at one time. A preheating and drying oven will quickly dry the paint on the barrels.

CHARLES STARROW DIES

BOSTON, Nov. 19.—Charles Storrow, head of the firm of Charles Storrow & Co. for over 50 years is dead in his eighty-seventh year. At the close of the World war he was engaged in the oil business at Oil City, Pa., for three years, amassing a fortune with which he returned to Boston and entered the cotton business.

Three Companies Bid To Supply Gas From Amarillo to Omaha

OMAHA, Neb., Nov. 22.—With the state all set for the reception of bids from three companies for piping natural gas to Omaha from the Amarillo field the H. L. Doherty company at the last minute last night asked for more time to submit its bid and the final date was set by the utilities commission for December 7. The bids of the Texas Company in conjunction with Columbian Carbon Co. and that of the Knorpp interests were both withdrawn without having been opened but will be resubmitted on December 7 at which time Doherty and the Empire Gas and Fuel Co. will have their bids ready.

Texas-Columbian Carbon have estimated the cost of a 24-inch pipe line from Amarillo to Omaha at from $35,000,000 to $40,000,000 and have announced they will organize a separate company to handle the Omaha business if given the contract.

It is pretty well assured that whoever gets the Omaha contract will also supply Lincoln, Des Moines, Sioux City and a number of smaller towns. The plan at Omaha is for the municipally owned gas company to purchase natural gas delivered at the city limits and to distribute this through the municipal mains.

INDIAN OIL TAXABLE, SAYS SUPREME COURT

WASHINGTON, Nov. 21.—Incomes derived by those holding leases on Indian tribal lands were declared taxable by the federal government under the revenue act of 1916 and those acts down to and including that of 1921 in a supreme court ruling today.

The suit was brought in the federal courts of western Pennsylvania, where taxes collected from Glenn T. Braden on income from oil leases on Osage Indian lands in Oklahoma were ordered refunded.

The government asserted that should the decision stand it would be required to pay back $150,000,000 collected in taxes, $822,346 being involved in the Braden case alone. It estimated that during 1926 the income from such leases amounted to $98,000,000, pointing out that the decision was so sweeping that it prohibited taxation of incomes from all Indian leases, not being confined to oil alone, but including mining leases.

"The power of the United States to tax the income is undoubted," Justice Stone said in his decision.

"Assuming that the Indians are not subject to the income tax, as contended, the fact that they are wards of the Government is not a persuasive reason for exempt taxation of others derived from their dealings with the Indians. Tax exemptions are never lightly to be inferred."

The decision thwarts more than a hundred tax suits that would have been filed against the government. Under the decision of the lower courts, practically every major oil company in the Mid-Continent could have sued for recovery of taxes paid during the past five years on such income.

The Osage Indians themselves are denied the return of $5,000,000 by this new decision. They get one-eighth royalty from the oil men and have paid taxes on this amount.

CARRYING RESERVE

The Government should carry in steel storage, at suitable points, not less than 100,000,000 bbls. of petroleum as Army and Navy reserves. It is an American policy that will far more than repay its cost; that it has not been done long ago, is without excuse.—Mark L. Requa, wartime director of oil.

O'DONOHOE HEADS TEXAS DIVISION, MID-CONTINENT OIL & GAS ASSN.

By C. D. Lockwood

FORT WORTH, Tex., Nov. 19.—"Good Fellowship" was the keynote of the meeting held in Fort Worth on Armistice Day by the Texas Division, Mid-Continent Oil & Gas Association. Oil men of the Lone Star State gathered from Houston, Wichita Falls, San Angelo, Dallas and many intermediate points to celebrate the ninth anniversary of the closing of the great war with a business session, a golf tournament, a bridge session and a banquet at the River Crest Country Club.

John F. O'Donohoe, president of the Petroleum Producers Co. of Wichita Falls, was elected president of the division to succeed J. D. Collett who has held the office for five years and requested that someone be selected to replace him.

The secretary of the association, J. P. Laney of Dallas, and the treasurer, W. M. Massie of Fort Worth, were re-elected. The new vice presidents are L. J. Black of Beaumont; W. A. Moncrief of Fort Worth; E. T. Moore of Dallas; John R. Suman of Houston; Judge H. E. Bell of Abilene; and Levi Smith of Texon.

J. D. Collett, independent oil producer of Fort Worth, the retiring president of the association, dwelt chiefly upon the subject of government control in his opening address. He declared that private initiative has made the oil industry what it is today and that any form of government control would seriously hamper further progress.

W. B. Pyron of the Gulf Production Co., Houston, spoke on steam pollution, outlining the difficulties encountered by refiners as fell as producers in keeping streams free from contamination. He stressed the importance of guarding against pollution of waters although it is a different proposition and stated that since the laws against pollution are on the statute books the authorities are right in enforcing them. He pointed out the need of complete co-operation by all companies in any given area since one negligent operator can nullify the careful work of all others.

W. B. Hamilton of Wichita Falls talked about the Oil and Gas Division of the West Texas Chamber of Commerce, of which he is chairman. He cited the need of clarifying titles to school lands in West Texas before oil development has progressed to the point where these lands are of high value. This should be done by amending the constitution rather than awaiting decision by the Supreme Court on cases now pending which will probably be in litigation for years to come. Mr. Hamilton stated that the people of West Texas realize the benefits they will receive from the oil development of that region and are sympathetic in their attitude toward the industry.

W. A. Moncreif talked briefly about the Pecos County proration plan, stating that it has worked out successfully and that all operators are satisfied with the results obtained up to this time. He pointed out that complete co-operation among all producers had been obtained and that this was necessary for the success of the plan.

Members of the board of directors, reported by a nominating committee composed of Roy B. Jones, Wichita Falls, John R. Suman, Houston; W. A. Moncrief, Fort Worth; W. H. Francis, Dallas, and James Charlton, Colorado, were elected by acclamation.

New Board Members

New members of the board who take places of transfers and other vacancies, included: R. O. Dulaney, Fort Worth; T. T. Pendleton, Fort Worth; J. H. Jenkins, Fort Worth, vice president of the Tidal Oil Co.; C. U. Daniels, Fort Worth, head of the land department of the Sinclair Oil & Gas Co.; James Hutchinson, Houston, Rio Bravo Oil Co.; L. E. Barrows, Fort Worth, division manager of The Texas Company; John F. O'Donohoe, Wichita Falls; Carl Young, Dallas, American Petroleum Institute standardization bureau; Harry Hines, independent operator, Wichita Falls; L. J. Black, Beaumont, Beaumont Iron Works; F. V. Faulkner, Dallas, vice president Magnolia Petroleum Co.; Woodall Rogers, Dallas; Stanley Cohagen, Amarillo, Midwest Exploration Co.; H. E. Bell, Abilene, Moutray Oil Co.; J. M. Charlton, Colorado, with the California Co., and Walter Alexander, Wichita Falls, Continental Oil Co. of Texas.

Judge Bell, until recently chief supervisor of the oil and gas division of the Railroad Commission of Texas was named by acclamation on motion of J. Edgar Pew of Dallas.

Directors Re-elected

Members of the board re-elected who with the new members represent executives of practically very important oil unit in the state, follow:

E. H. Blum, Atlantic Oil Producing Co., Dallas; J. S. Bridwell, Bridwell & Heydrick Oil Co., Wichita Falls; E. H. Buckner, Houston Oil Co.; C. C. Cartwright, National Supply Co., Fort Worth; W. D. Cline, Wichita Falls; J. D. Collett, Fort Worth; T. B. Cranfill, Cranfill Brothers Oil Co., Dallas; R. A. Crawford, Lone Star Gas Co., Dallas; John Crotty, Republic Supply Co., Houston; Frank Cullinan, Republic Production Co., Dallas; F. W. DeWolf, Humphreys Corp., Houston; Jack Dies, Humble Oil & Refining Co., Houston; R. L. Dudley, Houston; E. H. Eddleman, Wichita Falls; Charles Fitzgarald, Pure Oil Pipe Line Co., Dallas; W. B. Hamilton, Wichita Falls; Harry C. Hanszen, Wichita Falls; I. G. Harmon, Marland Oil Co., Fort Worth; W. M. Harrison, Star Refining & Producing Co., Fort Worth; R. S. Haseltine, Guiberson Corp., Dallas; T. B. Hoffer, Hoffer Oil Corp., Fort Worth; B. N. Honea, Fort Worth; J. K. Hughes, J. K. Hughes Developing Co., Mexia; Roy B. Jones, Panhandle Refining Co., Wichita Falls; C. F. Kelsey, Independent Oil & Gas Co., Fort Worth; J. A. Kemp, Wichita Falls; Fred M. Lege, Jr., Magnolia Gas Co., Dallas; J. F. Lucey, Lucey Petroleum Co,. Dallas; J. B. McCabe, Municipal Gas Co., Dallas; J. C. McCue, The Texas Company, Houston; C. B. McKinney, Houston Pipe Line Co., Houston; J. L. McMahon, The Texas Company, Wichita Falls; H. E. Marsh, Amerada Petroleum Corp., Fort Worth; W. M. Massie, Fort Worth; W. R. Mitchell, MacPherson Construction Co., Fort Worth; W. A. Moncrief, Marland Oil Co., Fort Worth; Adrian Moore, Rycade Oil Corp., Houston; Edward T. Moore, Simms Oil Co., Dallas; H. J. Morlang, Oil Well Supply Co., Fort Worth; J. M. Mouser, Prairie Oil & Gas Co., Eastland; Underwood Nazro, Gulf Production Co., Houston; J. R. Penn, Texas Pacific Coal & Oil Co., Fort Worth; Robert R. Penn, Dallas; J. Edgar Pew, Sun Oil Co., Dallas; D. C. Proctor, Gulf Production Co., Fort Worth; W. B. Pyron, Gulf Production Co., Fort Worth; J. D. Sandefer, Breckenridge; A. B. Smith, Pandem Oil Co., Dallas; Frank M. Smith, Oriental Oil Co., Dallas; Levi Smith, Big Lake Oil Co., Texon; B. S. SoRelle, Pure Oil Co., Fort Worth; John R. Suman, Humble Oil & Refining Co., Houston; W. B. Sutton, Vacuum Oil Co., Houston; F. L. Thomson, Grayburg Oil Co., San Antonio; John C. Townes, Humble Oil & Refining Co., Houston; Joseph M. Weaver, States Oil Corp., Eastland; J. C. Wilson, Wilson-Broach Co., Beaumont; C. L. Witherspoon, Witherspoon Oil Co., San Antonio; G. Clint Wood, Wichita Falls; E. F. Woodward, Houston.

John F. O'Donohoe

DISCUSS CHANGES IN NATURAL GASOLINE

(Continued from Page 36)

applied to natural gasoline production has required testing efficiency. Operations previously relied upon empirical methods which do not give information about the composition.

The object of low temperature fractionation is to separate the gas or gasoline into the actual chemical compounds and measure them in a pure state. This is done by a series of distillations at temperatures produced by using liquid air. The apparatus is of glass and the separation is made under high vacuum. Accuracy of very high order is attained and can be sacrificed for rapid analysis. Applications include standardizing other empirical tests and control of exacting processes. Its greatest value lies in determining efficiency of extraction equipment and development of new petroleum products and equipment for its manufacture.

Safety and Fire Prevention

George F. Pressing, chairman of the petroleum section of the National Safety Council, presented a paper on "Safety and Fire Prevention in Gasoline Plants." His paper will be found elsewhere in this issue.

Conservation of Vapors

The paper entitled "Production of Natural Gasoline by the Conservation of Vapors" was presented by W. G. Palmer. Due to limited time no discussion was had.

The author's purpose is to suggest the best means for conserving petroleum vapors in field operations; refinery vapors are mentioned but not discussed in detail. He classifies the vapors as coming from storage tanks, lease or rundown tanks, dehydrators, and reservoirs.

Results are given of tests made to determine the effect of color of the tank shell on shrinkage of vapor contents, and of tests to determine other factors in vapor conservation. The ideal conditions under which tank vapors can be handled are discussed and these conditions are stated to include:

(a) Vapor tight tanks, and (b) adequate relief valves and other control valves equipment. Reference is made to two forms of tank vapor control valves; the direct-acting and the indirect-acting.

Vapor-gathering systems are stated to consist of (a) tank laterals and (b) main lines. The following factors are named as important in tank-lateral operations; (a) Correct breather valves; (b) correct size of vapor line from tank to control valve; (c) provision for trapping pipe scale; (d) proper pitch of vapor line; (e) adequate drainage; (f) control line; (g) location of control valve.

INTERESTING ASPECTS ON NAVAL RESERVE

(Continued from Page 36)

remained the property of the Osage Nation.

The Marland Oil Co. holds a blanket gas lease upon this part of Osage County, and under the provisions of this gas lease the company has started a well. The part of the county where the well is drilling is rather close to the great Burbank Field, and it is quite possible that some oil may be found in this section. Should oil be found in the well, the Marland company, of course, under the regulations of the Osage Nation, will have to surrender its well, as it holds only the gas lease and has no share in the oil production.

However, since there is no oil lease upon this land, if oil should be found the result is not difficult to conjecture, and a wild scramble to obtain the oil lease will be witnessed at a public sale which would necessarily be held.

Another interesting aspect of this case is that it will afford an idea of the efficacy of government geological surveys as applied directly to structural conditions. The three areas marked in the double circle constituted what the government geologists considered the best structural conditions. It is significant that one of the regions was remarkably close to the Burbank Field. There have been numerous attempts to locate another Burbank and to date they have been failures. In the opinion of a student of Osage County, there will not be another Burbank on the west side of the Osage Nation, and this gentleman believes that the future oil production of the county will come from the further south and east regions where good production was found in smaller pools.

Whether the Marland test well now drilling will cause a big flurry in Osage land or whether it will suffer the fate of the numerous other attempts to locate another major pool on the west side of the Osage should be determined within the next 60 days.

OIL COMPANIES WIN ONE CASE IN MEXICO

The decision of the Mexican Supreme Court upholding a subsidiary of Pan American Petroleum & Transport Co. in its litigation against enforcement of part of new Mexican oil regulations is regarded as a victory for the company. The decision continues an injunction, obtained in the lower courts, preventing the Government from cancelling and refusing the company drilling permits. It directs the government department to issue the permits.

Section 14 gave companies one year to exchange their legal title to land for 50-year confirmatory concessions issued by the Government; Section 15 held that failure to do this was cause for Government denouncing such property in favor of itself.

While a few of the small producers complied with requirements, companies representing 75 per cent of Mexican oil production refused to comply. The Government retaliated by refusing drilling permits and cancelling many that had been made. Litigation followed.

The companies not complying made their stand on the following: That the oil laws were based on the Mexican Constitution (Carranza document) adopted May 1, 1917; that they did not object to the oil laws as applied to lands acquired subsequent to May 1, 1917, but they refused to exchange their legal titles for government concessions on lands acquired before the constitution was adopted; that these concessions, while supposed to run for 50 years, really ran from date of original acquisition of preconstitutional lands, which in most cases were 25 to 30 years ago, leaving such concessions 25 years or less to run; that in any event, life of concession was not the essence, rather that legally acquired property was being confiscated by law.

It is now, under the decree, incumbent on the minister of industry, commerce and labor in charge of enforcing the law, to grant permits to the Pan American Petroleum & Transport.

The decree does not cover any of the other 18 similar cases pending, and under the civil law of Mexico one decision does not set a precedent. Five similar decisions are necessary before the findings become known as "jurisprudence," or the law of the land. Hence, four more decrees are necessary to eliminate finally Articles 14 and 15 as confiscatory and unconstitutional.

WILDCAT OPERATIONS IN WEST TEXAS

(Continued from Page 42)

Quinby Oil Co.'s No. 1 A. A. Gary, 660 ft. N and 1,320 ft. E SW cor. Sec. 593, Abst. 3,009, elev. 2,551 ft. ..... Shut down 700 ft.
Red Bank Oil Co.'s No. 1 Arthur Harral ..... Rig on ground.
Robert Lee's No. 1 Joe Parker ..... New location.
B. J. Spikes' No. 1 George Brown ..... Machine on ground.
Transcontinental Oil Co.'s No. 1 Blackston & Slaughter, Sec. 29, Blk. 129, F. St. L. Sur., elev. 3,539 ft. ..... 250 ft. sulphur water in black sand 1,150-80 ft.; small show oil 1,510 ft.; show gas 1,540 ft., show oil 2,080 ft.; drlg. 3,090 ft.

World Oil Co.'s No. 1 Kloh, Sec. 47, Blk. 48, Twp. 8, T. P. R. R. Sur., elev. 2,810 ft. ..... Rigging up.
World Oil Co.'s No. 1 Serf, SW cor. NE Sec. 10, Blk. 130, T. & St. L., elev. 3,245 ft. ..... Rig.

Yates Pool, Pecos County
(* denotes test in extension territory.)

*Ailsman & Bell's No. 4 River Bed, 325 ft. upsteam from No. 3 ..... Show oil 710 ft.; top pay 840 ft.; drlg. 1,001 ft.; flow, 25 bbls. hr.
*Ailsman & Bell's No. 5 River Bed, 312 ft. N of No. 4 .... Location.
*Ailsman & Bell's No. 11 River Bed, 150 ft. S & E of NE cor. Sec. 71, Blk. 1 ..... Rigging up.
California Co.'s No. 2 Yates, Sec. 34, Blk. 194 ..... Rig standing.
California Co.'s No. 6 Yates, Sec. 34, Blk. 194 ..... Drlg. 1,082 ft.
California Co.'s No. 7 Yates, Sec. 34, Blk. 194 ..... Stand. cem. 1,093 ft.
California Co.'s No. 8 Yates, Sec. 34, Blk. 194 ..... Run. 10-in. 466 ft.
California Co.'s No. 4 Smith, Sec. 35, Blk. 194 ..... Rigging up.
California Co.'s No. 5 Smith, Sec. 35 ..... Building rig.
California Co.'s No. 6 Smith, Sec. 35 ..... Moving in rig.
California Co.'s No. 7 Smith, Sec. 35 ..... Building rig.
California Co.'s No. 8 Smith ..... Clearing location.
*Douglas Oil Co. and Roxana's No. 1 J. T. Sellman, SW cor. Sec. 6, Blk. 194 ..... Sulphur water 1,518-19 ft.; shut down for orders.
*Day Bros. & McKnight's No. 1 Yates, NW cor. Sec. 58, Blk. 1 ..... Top salt 440 ft.; set 8-in. 520 ft.
Gulf Prod. Co.'s No. 2 Smith, Sec. 28, Blk. 194 ..... Drlg. 685 ft.
Gulf Prod. Co.'s No. 3 Smith ..... Cellar.
Gulf Prod. Co.'s No. 4 Smith ..... Cellar.
Gulf Prod. Co.'s No. 5 Smith ..... Cellar.
*Gulf Prod. Co.'s No. 1 Yates, Runnels Co. School Land .. Drlg. 960 ft.
*Gulf Prod. Co.'s No. 2 Yates, Runnels Co. School Land .. Cem. 8-in. 1,229 ft., brown lime.
*Humble O. & R. Co.'s No. 3 Smith, Sec. 36, Blk. 194 ..... Cem. 6-in. 1,312 ft.
Humble O. & R. Co.'s No. 4 Smith ..... Location.
*Humble O. & R. Co.'s No. 1 Smith-B, Sec. 101, Blk. 194 .. Fishing 265 ft.; 4 strings tools in hole.
*Humble O. & R. Co.'s No. 2 Smith-B, Sec. 101, Blk. 194 .. Drlg. 1,010 ft.
Kirby Pet. and Edson's No. 1 Tippett, Sec. 108, Blk. 194, elev. 2,547 ft. ..... Top lime 1,268 ft.; drlg. ahead.
*Mazda and Savoy's No. 2 Smith, Sec. 24, Blk. 194 ..... Location.
*McMan and Marland's No. 8 Yates, Sec. 34½, Blk. 194 .. Top pay 1,340 ft.; drlg. 1,485 ft.; flowing.
*McMan and Marland's No. 9 Yates, Sec. 34½, Blk. 194 .. Completed at 1,500 ft.
*McMan and Marland's No. 10 Yates, Sec. 34½, Blk. 194.. Stand. cem. 1,318 ft.
McMan and Marland's No. 11 Yates, Sec. 34½, Blk. 194 .. Drlg. 370 ft.
McMan and Marland's No. 12 Yates, Sec. 34½, Blk. 194 .. Rigging up.
Marland Oil Co.'s No. 5 Yates-A, Sec. 60, Blk. 1 ..... Drlg. 420 ft.
Marland Oil Co.'s No. 6 Yates-A, Sec. 60, Blk. 1 ..... Drlg. 445 ft.
Marland Oil Co.'s No. 7 Yates-A, Sec. 60, Blk. 1 ..... Drlg. 390 ft.
Marland Oil Co.'s No. 8 Yates-A, Sec. 60, Blk. 1 ..... Pulling 12-in. 230 ft.
Mid-Kansas and Transcontinental's No. 8 Yates-A, Sec. 33½, Blk. 194 ..... Drlg. 95 ft.
Mid-Kansas and Transcontinental's No. 9 Yates-A, Sec. 33½, Blk. 194 (W of No. 2) ..... Drlg. 970 ft.; spray, little oil.
Mid-Kansas and Transcontinental's No. 10 Yates-A, Sec. 33½, Blk. 194 (N of No. 1) ..... Waiting for machine.
*Mid-Kansas and Transcontinental's No. 11 Yates-A, Sec. 33½, Blk. 194 (S of No. 1) ..... Drlg. 70 ft.
Mid-Kansas and Transcontinental's No. 12 Yates-A ..... Waiting on machine.
Mid-Kansas and Transcontinental's No. 13 Yates-A ..... Rigging up; waiting on machine.
Mid-Kansas and Transcontinental's No. 14 Yates-A ..... Rigging up; waiting on machine.
Mid-Kansas and Transcontinental's No. 7 Yates-B, Sec. 61, Blk. 1 ..... Drlg. 715 ft.
Mid-Kansas and Transcontinental's No. 8 Yates-B, Sec. 61, Blk. 1 ..... Drlg. 907 ft.
Mid-Kansas and Transcontinental's No. 9 Yates-B, Sec. 61, Blk. 1 ..... Show gas 560 ft. shut down 1,080 ft.
Mid-Kansas and Transcontinental's No. 10 Yates-B, Sec. 61, Blk. 1 ..... Clearing location.
Mid-Kansas and Transcontinental's No. 11 Yates-B ..... Digging cellar.
*Mid-Kansas and Transcontinental's No. 12 Yates-B ..... Location.
Mid-Kansas and Transcontinental's No. 13 Yates-B ..... Rigging up.
Mid-Kansas and Transcontinental's No. 14 Yates-B ..... Rigging up.
Mid-Kansas and Transcontinental's No. 15 Yates-B ..... Drlg. 230 ft.
Mid-Kansas and Transcontinental's No. 16 Yates-B ..... Rigging up.
Mid-Kansas and Transcontinental's No. 17 Yates-B ..... Clearing location.
Mid-Kansas and Transcontinental's No. 4 Yates-C, Sec. 60, Blk. 1 ..... Waiting on machine.
Mid-Kansas and Transcontinental's No. 5 Yates-C ..... Drlg. 850 ft.
Mid-Kansas and Transcontinental's No. 6 Yates-C ..... Waiting on machine.
Mid-Kansas and Transcontinental's No. 7 Yates-C ..... Drlg. 35 ft.
Mid-Kansas and Transcontinental's No. 8 Yates-C ..... Location.
Mid-Kansas and Transcontinental's No. 9 Yates-C ..... Location.
Mid-Kansas and Transcontinental's No. 10 Yates-C ..... Location.
Mid-Kansas and Transcontinental's No. 1 Yates-D, Sec. 62, Blk. 1 ..... Flowed 1,090 bbls. in 12 hrs. Saturday; fish, 1,330 ft. for bit.
Mid-Kansas and Transcontinental's No. 2 Yates-D, SW part Sec. 62, Blk. 1 ..... Cellar; waiting for machine.
*Mid-Kansas and Transcontinental's No. 1 Yates-E, C W Sec. 59, Blk. 1 ..... Drlg. 480 ft.
Mid-Kansas and Transcontinental's No. 3 Smith-Taylor, Sec. 33, Blk. 194 ..... Total depth 1,395 ft.; will deepen; flow, 320 bbls. hr.
Mid-Kansas and Transcontinental's No. 4 Smith-Taylor, Sec. 33, Blk. 194 ..... Drlg. 575 ft.
Mid-Kansas and Transcontinental's No. 5 Smith-Tayler ..... Drlg. 425 ft.
Mid-Kansas and Transcontinental's No. 6 Smith-Taylor.. Drlg. 400 ft.
*Mid-Kansas and Transcontinental's No. 1 M. A. Smith, Sec. 31, Blk. 194 ..... Total depth 1,565 ft.; plugging.
*Red Bank Oil Co.'s No. 2 Smith, Sec. 24, Blk. 194 ..... Show gas 1,019-27 ft.; top pay 1,555 ft.; drlg. 1,575 ft.; 300 ft. oil in hole.
*Roxana Pet. Corp.'s No. 3 Tippett, Sec. 102, Blk. 194 .... Drlg. 1,370 ft.
Roxana Pet. Corp.'s No. 4 Tippett ..... Rigging up.
Roxana Pet. Corp.'s No. 2 Smith, SE cor. SW Sec. 27, Blk 194 ..... Drilling 730 ft.
Simms Oil Co's No. 3 Smith, Sec. 103, Blk. 194 ..... Drlg. 515 ft.
Simms Oil Co.'s No. 4 Smith, Sec. 103, Blk. 194 ..... Drlg. 385 ft.
Simmons et al's No. 1 ..... Drlg. 190 ft.
Layne-Tex Oil Co.'s No. 1 ..... Pull. 12-in. 60 ft.

PRESIDIO COUNTY

Headlock & Miller's No. 1 Tootle Est., Sec. 123, Blk. 3, D. & P. Sur., elev. 2,912 ft. ..... Salt water 2,610 ft.; total depth 3,003 ft.; shut down for orders.
Pinto Canyon Oil Co.'s No. 1 Fields, 1,760 ft S and E NW cor. Sec. 74, Blk. 2, D. & P. Sur. ..... Location.

REAGAN COUNTY

Henshaw & Camp's No. 1 University, Sec. 14, Blk. 49, University Land, elev. 2,772 ft. ..... 250 ft. sulphur water at 800 ft., shut down 2,075 ft. for 8-in. casing.
Skelly Oil Co.'s No. 1 University, SW cor. Sec. 33, Blk. 8, University Land ..... Top salt 1,340 ft.; drilling 2,240 ft.
Texon O. & L. Co.'s No. 1-B University, Group 1 ..... Top pay 6,284 ft.; total depth 6,590 ft.; 3,800 ft. of 38.7 gravity oil in hole; shut down.
White et al's No. 1 Shofner & Sterling, SE cor. NW Sec. 10, 2 m. N of Big Lake ..... Shut down 670 ft.

REEVES COUNTY

Exploration Co.'s No. 1 A. A. Kinney, 1,500 ft. W of NE cor. Sec. 26, Blk. C-18, Public School Land, elev. 2,847 ft. ..... Total depth 895 ft.; underream 12-in.
Grisham-Hunter Corp.'s No. 1 Rathge & Connor ..... Moving in machine.
David R. Thompson's No. 1 A. A. Eddins ..... Drlg. 3,271 ft.
World Oil Co.'s No. 1 Bigga, C SE Sec. 65, Blk. 112, Public School Land Sur., elev. 3,068 ft. ..... Shut down 1,610 ft.
World Oil Co.'s No. 1 Duff, elev. 2,753 ft. ..... Top Delaware lime 4,185 ft., hole full brackish salt water 4,368-4,500 ft.; plug. back to 4,250 ft. to shoot.

RUNNELS COUNTY

Empire G. & F. Co.'s No. 1 C. C. Clay ..... Drlg. 275 ft.
Gibson & Johnson's No. 1 Harris Est., Juliana Voske Cabrera Sur. ..... Location.
Gibson & Johnson's No. 1 H. P. Serratt, C SE NW Sec. 150, E. T. R. R. Sur. ..... Location.
Kennedy et al's No. 1 J. E. Tally ..... Shut down 1,720 ft.
May et al's No. 1 J. M. Schneider, John Wall Sur. ..... One-half bailer salt water 1,032 ft.; run. 10-in. 1,056 ft.
Miles Oil Co.'s No. 1 Charles Ray, Sec. 21, T. & N. O. Sur. ..... Cellar.
Miles Oil Co.'s No. 1 L. S. Lawhon, NE cor. Sec. 68 .. Show gas 960-80 ft.; drlg. 2,200 ft.
Noble O. & G. Co.'s No. 1 Sims, Sec. 12, J. J. McHenry Sur. ..... Hole full sulphur water 2,710-30 ft.; drlg. 2,775 ft.
Royal Pet. Co.'s No. 1 A. C. Willingham ..... New location.
Swensondale Oil Co.'s No. 1 E. A. Werner ..... Drlg. 1,500 ft.
Swenwood Oil Corp.'s No. 1 H. B. Fowler ..... Location.
Watchorn O. & G. Co.'s No. 1 J. L. King ..... Building rig.

SCHLEICHER COUNTY

Beavers & Leath et al's No. 1 J. A. and W. T. Whitten, C NW Sec. 35, Blk. 11, T. O. Sur. ..... Shut down 400 ft.
Thomas Grey et al's No. 1 Ball Robinson, C NW Sec. 25, Blk. M, G. H. & S. A. Sur. ..... Sulphur water 2,125 ft.; hole full water 2,160-80 ft. and 2,935 ft.; shut down for orders 3,004 ft.

SCURRY COUNTY

I. B. Mims et al's No. 1 J. J. Koonsman, Sec. 220, Blk. 2, H. & T. C. Sur. ..... Location.

STERLING COUNTY

Orr et al's No. 1 Neal Reed, CNL Sec. 15, Blk. 30, W. & N. W. Sur. ..... Shut down 1,390 ft.; (corrected).

STONEWALL COUNTY

Peer Oil Corp. and Producers Oil Co.'s (was J. P. Johnson's) No. 1 R. P. Morrow ..... Hole full water 2,625-90 ft.; set 10-in. 2,700 ft.; drlg. 2,940 ft.

TAYLOR COUNTY

A. J. Brown et al's No. 1 Henslee, NE cor. Sec. 5, Blk. 4, S. P. R. R. Sur. ..... Fish. 2,265 ft.
Dorning & Perrine's No. 1 J. A. Hammer, C N 100 acres, Sec. 23, Blk. 19, T. & P. Sur., elev. 1,904 ft. ... Shut down 455 ft.
Gilbert Johnson and Day Bros.' No. 1 C. M. Brown, Sec. 1, Blk. 6, T. & P. Sur. ..... Drlg. 440 ft.
Owen & Sloan's No. 1 Lattimer, Sec. 14, Blk. 9, T. & P. Sur. ..... Shut down 2,605 ft.
Roesser & Pendleton's No. 1 Sam Hutman, C W half NW Sec. 64, Blk. 5, T. & P. Sur. ..... Water sand 2,222 ft.; fishing 2,714 ft.

TERRELL COUNTY

Wilham Exploration Co.'s No. 1 Bassett, CNL Sec. 99, Blk. Y, W. H. Robertson Sur. ..... Rig on ground.

TERRY COUNTY

Kingsland O. & P. Co.'s No. 1 Brownsfield, C NW SW SW Sec. 7, Blk. 1-A, E. L. R. R. Sur. ..... Slight show gas 2,230 ft.; shut down 3,207 ft. (S. L. M. corrected); contract completed.

TOM GREEN COUNTY

George Amery's No. 1 Wilkey, C SW Sec. 3, B. A. L. Sur. ..... Location.
Cox et al's No. 1 Liano ..... Total depth 470 ft.; shut down.
Fitzgerald et al's No. 1 Bennett ..... Drilling 1,625 ft.
Marland Oil Co.'s No. 1 J. W. Johnson, C SE, Sec. 6, B. B. Sanderson Sur. ..... Drlg. 1,790 ft.
Marland Oil Co.'s No. 1 J. W. Johnson-A ..... Drilling 35 ft., cable tools.
Tulsa Oil Co.'s No. 1 Adams, C SW Sec. 165, Blk. 11, S. P. R. R. Sur. ..... Fishing tools 300 ft.

UPTON COUNTY

Mark Curtis et al's (was Hults et al's) No. 2 Giddings, 5,336 ft. S and 6,678 ft. E of NW cor. Throckmorton Co. School Land, League 1, elev. 2,757 ft ..... Shut down 250 ft.
Skelly Oil Co.'s No. 2 J. F. Lane, SW cor. SE SE Sec. 3, G. C. & S. F. Sur. ..... Drlg. 540 ft.
Southern C. O. P. Co.'s No. 1 C. W. Hobbs ..... Drlg. 1,100 ft.
The Texas Company and Cordova Union's No. 1 Union Land, Sec. 23, Blk. 35, H. & T. C. ..... Set. 6-in. 2,223 ft.; show oil 2,098-2,106 ft.
Tulsa Drlg. Co.'s No. 1 W. A. Chaney, Sec. 18, Blk. 3, M. K. T. Sur. ..... Top salt 670 ft.; drlg 1,750 ft.
Wise & Jackson's No 1 J. H. Porter, SW cor. SW SW Sec. 184, Blk. E, elev. 2,592 ft. ..... Top pay 3,419 ft.; total depth 3,517 ft., gray lime; shut down

VAL VERDE COUNTY

A. Blume et al's No. 1 Moore Est., Sec. 183, J. Mitchell Sur., elev. 953 ft. ..... Shut down 3,000 ft.
Curso Williams' No. 1 Holman, NE NE Sec. 5, Blk. N, G. H. & S. A. Sur. ..... Shut down 2,940 ft.
Douglas Oil Co.'s No. 1 Sellars, C SE Sec. 82, Blk. A, I. & G. N. Sur. ..... Drlg. 4,010 ft.
East Del Rio Oil Co.'s No. 1 Russell, SE cor. Sec. 183, Del Rio Town Sur., elev. 941 ft. ..... Total deptn 3,190 ft.; shut down
Magnolia Pet. Co.'s No. 1 Whitehead, Sec. 81, D. G. C. & S. F. Sur., elev. 1,770 ft. ..... Drlg. 4,850 ft.
Independent Operators' No. 1 Whitehad, SE SE Sec. 80, Blk. 4, I. & G. N. Sur., elev. 1,175 ft. ..... Shut down 3,900 ft.
O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I. & G. N. Sur., elev. 2,130 ft. ..... Gas sand 2,491-2,520 ft.; tested 125,750 ft. gas; reset 8-in. 2,511 ft.; drlg. 2,860 ft.

WINKLER COUNTY

Amerada Pet. Corp.'s No. 1 J. B. Walton, SW cor. NW Sec. 45, Blk. 26, elev. 2,833 ft. ..... Top salt 1,086 ft.; 2,500,000 ft. gas 1,700-08 ft.; killed gas with 3½ tons baroid; cored brown lime carrying oil 2,334 ft.; cem. 8-in.; standardizing.
Atlantic O. P. Co.'s No. 1 Ida Hendrick, SE cor. W half NE Sec. 44, Blk. 36 ..... Total depth 2,727 ft.; cementing 8-in.; standardizing.
Atlantic O. P. Co.'s No. 2 Grisham-Hunter ..... Total depth 2,514 ft.; clean. out.
Atlantic O. P. Co.'s No. 1 Grisham-Hunter-C (was Lemar) ..... Total depth 2,130 ft.; cemented 8-in.; rigging rotary.
Atlantic O. P. Co.'s No. 1 Ida Hendrick-D ..... Drlg. 2,200 ft.
Atlantic O. P. Co.'s No. 1 Grisham-Hunter-E ..... Shut down 946 ft.
V. T. Bolin et al's No. 1 Brown ..... Rigging cable tools.
Magnolia Pet. Co.'s (was G. M. Church et al's) No. 1 Ida Hendrick, Sec. 29, Blk. B-5 ..... 1,000,000 ft. gas 2,560 ft.; drlg 2,692 ft.; 2,000,000 ft. gas 2,610 ft.
Magnolia Pet. Co.'s (was G. M. Church et al's) No. 2 Ida Hendrick ..... Stand. cem. 2,519 ft.
Magnolia Pet. Co.'s No. 3 Ida Hendrick ..... Spudding.
Cranfill Bros. and California Co.'s No. 1 M. J. Bashara, st cor. Secs. 10, 11, 22 and 23, School Blk. 77 ..... Drlg. 3,290 ft., anhydrite.
Cranfill & Reynold's No. 2 Ida Hendrick-A, C SE NW NW Sec. 28, Blk. B-5 ..... Drlg. 2,850 ft.; spray, little oil.
Cranfill & Reynold's No. 1 Grisham-Hunter-B, Sec. 35, Blk. B-5 ..... Drlg. 1,820 ft.
Eastland Oil Co. and Arnold's No. 1, Sec. 36, Blk. B-5 ... Drlg. 2,400 ft.
Gulf Prod. Co.'s No. 3 T. G. Hendrick ..... 250,000 ft. gas 2,623-25 ft.; drlg 2,640 ft.
Gulf Prod. Co.'s No. 5 T. G. Hendrick ..... Drlg. 2,740 ft., brown lime; show oil 2,635-40 ft.
Gulf Prod. Co.'s No. 6 T. G. Hendrick, NE cor. NW Sec. 34 ..... 4,000,000 ft. gas 2,718-20 ft. sprayed 20 bbls.
Humble O. & R. Co.'s No. 1 T. G. Hendrick, NW cor. NE Sec. 34, Blk. B-5, Public School Land, elev. 2,816 ft. ..... Total depth 2,763 ft.; fished out one bit; gas which had been killed broke loose again; shut down.

Humble O. & R. Co.'s No. 3 Hendrick, Sec. 34, Blk. B-5.. 5,000,000 ft. gas from 2,194 ft., total depth 2,370 ft.; fishing drill stem.

Humble O. & R. Co.'s No. 4 Hendrick, Sec. 34 ..... 5,000,000 ft. gas from 2,252 ft. 15,000,000 ft. at 2,667 ft.; total depth 2,815 ft.; trying to kill gas; total amount 40,000,000 ft.

Humble O. & R. Co.'s No. 1 Ida Hendrick-B ..... Drlg. 1,870 ft.
Humble O. & R. Co.'s No. 2 Ida Hendrick-B ..... Rig on ground.
Humble O. & R. Co.'s No. 3 Ida Hendrick-B ..... Drlg. 650 ft.
Independent O. & G. Co.'s No. 1 J. S. Howe-D, NE cor. W half SE Sec. 44, Blk. 26 ..... Total depth 2,729 ft.; standardizing.

Independent O. & G. Co.'s No. 1 Hendricks-A, elev. 2,816 ft. ..... 250,000 ft. gas 2,555-75 ft.; 12 bbls. water 2,770-75 ft. and show oil; 200 ft. oil in hole; show oil; 200 ft. oil in hole; flowed 7,677 bbls. at 2,878-79 ft.

Independent O. & G. Co.'s No. 2 Hendricks-A, elev. 2,822 ft. ..... Show gas 2,620 ft.; shut down 2,740 ft.

Independent O. & G. Co.'s No. 1 Vardeman-B ..... Drlg. 575 ft.
Independent O. & G. Co.'s No. 2 Vardeman-B ..... Cellar.
Liner Drlg. Co.'s No. 1 Seth-Campbell, NE cor. Sec. 2, Blk B-5 ..... Shut down 450 ft.

Landreth Prod. Corp.'s No. 1 Hendrick-A, SE cor. SW Sec. 29, Blk. B-5 ..... Top lime 2,663 ft.; show oil 2,6[illegible] ft. and 2,875 ft.; 1,400 ft. oil 2,925 ft.; 200 ft. sulphur water 3,009-13 ft.; water exhausted; filled hole up to 2,950 ft. with gravel; making 3 bailers oil hr.

Landreth and Roxana's No. 2 Ida Hendrick-A, Sec. 29, Blk. B-5 ..... Part rigged and shut down.
Landreth and Roxana's No. 3 Ida Hendrick-A, Sec. 29, Blk. B-5 ..... Part rigged and shut down.
Landreth and Roxana's No. 4 Ida Hendrick-A ..... Standardizing 2,587 ft.
Murchison Oil Co. et al's (was Marland Oil Co.'s) No. 1 Grisham-Hunter-B ..... Location.
Murchison Oil Co. et al's (was Marland Oil Co.'s) No. 2 Grisham-Hunter-B ..... Standardizing 2,890 ft.; no oil or gas showing.

Murchison Oil Co. et al's (was Marland Oil Co.'s) No. 3 Grisham-Hunter-B ..... Showing oil 2,630 ft.; total depth 2,427 ft.; tore down standard rig; standing cemented.

Murchison Oil Co. et al's (was Marland Oil Co.'s) No. 4 Grisham-Hunter-B ..... Cem. 8-in. 2,502 ft.
Mining & Engineering Co.'s No. 1 T. G. Hendrick, Sec. 10, Blk. B-12 ..... Rigging up.
R. S. Matthews et al's No. 1 State, C Sec. 7, Blk. A-57, Public School Land Sur., elev. 3,128 ft. ..... Small show oil 3,890-3,900 ft.; shut down 4,160 ft.

Murchison Oil Co. and Cranfill Bros.' No. 2 Grisham-Hunter ..... Location.
Murchison Oil Co. and Cranfill Bros.' No. 4 Grisham-Hunter ..... Location.
Pure Oil Co.'s No. 2 Hendrick, elev. 2,827 ..... Top salt 1,518 ft.; top lime 2,39[illegible] ft.; made 20-bbl. head at 2,63[illegible] 43 ft.; 1,200 ft. oil in hole 2,657 80 ft.; drlg. 2,710 ft.

Pure Oil Co.'s No. 3 Hendrick, NE cor. SW Sec. 41, Blk. B-5 ..... Cem. 8-in. 2,360 ft.
Pure Oil Co.'s No. 1 Hendrick-B, NE cor. SE Sec. 34, Blk. B-5 ..... Show gas 2,350-60 ft.; show oil 2,380 ft.; 15,000,000 ft. gas at 2,490 ft.; more gas 2,564 ft; total of 20,000,000 ft. gas; total depth 2,700 ft.

Pure Oil Co.'s No. 2 Hendrick-B ..... Top lime 2,387 ft.; standardized 2,387 ft. and connecting up.
Pure Oil Co.'s No. 3 Hendrick-B ..... Cem. 8-in. 2,438 ft and shut down.
Pure Oil Co.'s No. 4 Hendrick-B ..... Location.
Republic Prod. Co.'s No. 1 Grisham-Hunter-A, NW cor. E half SW Sec. 45, School Block 26 ..... Top lime 2,125 ft.; 15,000,000 ft. gas at 2,775 ft.; shut down for orders.

Republic Prod. Co.'s No. 1-A Grisham-Hunter-B, SW cor. E half SE Sec. 41, Blk. B-5 ..... Shut down 1,410 ft.; gas still breaking in.
Republic Prod. Co.'s No. 2 Grisham-Hunter-B ..... Drlg. 2,150 ft.
Roxana Pet. Corp.'s No. 1 Grisham-Hunter-A, SW cor. E half NW Sec. 45, School Blk. 26 ..... Top lime 2,428 ft.; little gas, show oil and gas 2,570 ft.; increase gas at 2,597 ft.; spraying oil 2,760-65 ft.; 65,000,000 ft. gas 2,800-01 ft.; blew tools up in hole; gas broke gauge at 59,500,000 ft.

Roxana Pet. Corp.'s No. 1 Grisham-Hunter-B, SW cor. S half SE Sec. 29, Blk. B-5 ..... Top lime 2,657 ft.; show oil and gas 2,630 ft.; shut down 3,002 ft.; fish. out tools.

Roxana Pet. Corp.'s No. 2 Grisham-Hunter-B, NW cor. S half SE Sec. 29, Blk. B-5 ..... Pits dug; moved off material.
Roxana Pet. Corp.'s No. 1 Grisham-Hunter-C, NW of Sec. 29, Blk. B-5 ..... 1,300 ft. oil 2,692-95 ft.; flowed 980 bbls. in 1 hr. 2,885 ft.

Roxana Pet. Corp.'s No. 1 Grisham-Hunter-D, SW cor. S half NE Sec. 41, Blk. B-5 ..... Cem. 8-in. 2,275 ft.
Roxana Pet. Corp.'s No. 2 Grisham-Hunter-D ..... Location.
Sheldon & Burden's No. 1 Ida Hendrick, SW cor. SE Sec. 28, Blk. B-5 (10-a. tract) ..... Drlg. 820 ft.
Southern C. O. P. Co.'s No. 3 T-67 Hendrick-C, SE cor. NE Sec. 33, Blk. B-5, elev. 2,816 ft. ..... Drlg. ahead 2,862 ft.
Southern C. O. P. Co.'s No. 4 T-67 Hendrick-C, elev. 2,810 ft. ..... Drlg. 2,820 ft.
Southern C. O. P. Co.'s No. 2 Ida Hendrick T-88-B ..... Total depth 2,659 ft.; cem. 6-in. in lime; stand. cem.

Southern C. O. P. Co.'s No. 1-F Hendrick, Sec. 33, Blk. B-5, NE cor. SE ..... Show oil 2,653 ft.; 2,000,000 ft. gas and show oil 2,724 ft.; flowed 1,715 bbls. 2,920-80 ft.; fish. tools.

Southern C. O. P. Co.'s No. 1 T-89 Grisham-Hunter-A, CWL NE SW Sec 35, Blk. B-5, elev. 2,816 ft. .... Top salt, 1,219 ft; top lime, 2,295 ft.; 10,000,000 ft. gas 2,473-78 ft.; 3,000,000-ft. increase at 2,487 ft.; spraying oil from 2,685 ft.; fish. bit 2,687 ft.

Southern C. O. P. Co.'s No. 2 T-89 Grisham-Hunter-A, Sec. 35, Blk. B-5 ..... Drlg. 560 ft.
Southern C. O. P. Co.'s No. 3 T-89-A Grisham-Hunter-A.. New location.
Southern C. O. P. Co.'s No. 4 T-89-A Grisham-Hunter-A.. New location.
Texon O. & L. Co.'s No. 2 Grisham-Hunter-A ..... 5,000,000 ft. gas 2,260-2,500 ft.; 15,000,000 ft. gas 2,646-56 ft.; shut down 2,656 ft.

Texon O. & L. Co.'s No. 3 Grisham-Hunter-A, NW cor. W half SE Sec. 41, Blk. B-5 ..... Cem. 8-in. 2,140 ft.
Texon O. & L. Co.'s No. 1 Grisham-Hunter-B, NW cor. W half SW Sec. 45, School Blk. 26 ..... Shut down 1,150 ft. to install rotary.

Texon O. & L. Co.'s No. 2 Grisham-Hunter-B ..... Will install rotary.
White Eagle O. & R. Co.'s (was Gibson & Johnson's) No. 1 P. A. Lock 1,320 ft. W of NE cor. Sec. 30, Blk. 74, NW of discovery well, elev. 2,830 ft. ..... Total depth 3,260 ft.; cementing; tools and bailer in hole.; drlg. out cement.

Southern C. O. P. Co.'s No. 1 Ida Hendrick 3-T-67-A, C SW NW NE Sec. 4, Blk. B-12, elev. 2,784 ft. ..... Top lime 2,638 ft.; slight show oil 3,000-08 ft.; filled up 1,500 ft. sulphur water at 3,065-72 ft.; plugged back to 3,050 ft. and shut off water; will shoot in future; flows 5 bbls. daily.

Southern C. O. P. Co.'s No. 2 Ida Hendrick 3-T-67-A .... Standing cemented 2,646 ft.; tore down rotary.

Southern C. O. P. Co.'s No. 1 T-67 Hendrick-B, NE cor. SE Sec. 24, Blk. 26 ..... Top salt 2,210 ft.; top lime 2,648 ft.; total depth 2,648 ft.; rigged tools and shut down.

Tidal Oil Co.'s No. 1 J. W. Amburgey, C Sec. 24, Blk. B-7, Public School Land, elev. 2,992 ft. ..... Top salt 1,220 ft.; ½ bailer sulphur water per hr. 4,308 ft.; 2 bailers hr. 4,400 ft.; dry and aban. 4,800 ft.

Southern C. O. P. Co.'s No. 1 Hendrick 3-T-68-A, SW cor. W half NW Sec. 35, Blk. B-5 ..... Top salt 1,365 ft.; top lime 2,39[illegible] ft.; top pay 2,440 ft.; drilling 2,618 ft.; makes 20-bbl. head every day.

Southern C. O. P. Co.'s No. 2 Hendrick 3-T-68-A ..... Standardized 2,288 ft. and shut down.
Southern C. O. P. Co.'s No. 3 Hendrick 3-T-68-A ..... Cem. 8-in. 2,118 ft.
Southern C. O. P. Co.'s No. 2 T-88 Hendrick-C, Sec. 28, Blk. B-5 ..... Cem. 6-in. 2,435 ft.; standardized.
Southern C. O. P. Co.'s No. 1 T-88 Ida Hendrick-C, NW cor. Sec. 28, Blk. B-5 ..... 6,000,000 ft. gas 2,665 ft.; fish tools 2,817 ft.
Southern C. O. P. Co.'s No. 3 Ida Hendrick, T-88-C ..... Standardized 2,499 ft.
Southern C. O. P. Co.'s No. 4 Ida Hendrick, T-88-C ..... Spudding.
Southern C. O. P. Co.'s No. 5 Ida Hendrick, T-88-C ..... Rigging up rotary.
Southern C. O. P. Co.'s No. 6 Ida Hendrick, T-88-C ..... Rigging up rotary.
Southern C. O. P. Co.'s No. 7 Ida Hendrick, T-88-C ..... New location.
Turman & Maxwell's No. 1 Ida Hendrick ..... Shut down for tankage 2,879 ft.; sprayed 200 bbls.
Turman & Maxwell's No. 2 Ida Hendrick ..... Cem. 6-in. 2,452 ft.
Southern C. O. P. Co.'s No. 1 Ida Hendrick, T-88-G, SW SE Sec. 28, Blk. B-5 ..... Location; moved material away.

WILDCAT OPERATIONS IN PANHANDLE

(Continued from Page 38)

Neudigate et al's No. 1 A. Chapman, NE cor. E ½ SE, Sec. 52, Blk. 25 ..... 500,000 ft. gas, 2,760-65 ft; rainbow of oil, 2,820-25 ft; salt water; granite wash, 2,2827-28 ft; S.D., 2,835 ft.

Operators Oil Co.'s No. 1 Jackson ..... 1,000,000 ft. gas at 2,465 ft; T.D. 2,760 ft; run 8-in.

Operators Oil Co.'s No. 2 Bowers, NE cor., Sec. 35, Blk. 3, I. & G. N. Sur. ..... Show oil, 3,097 and 3,181 ft; and 3,313 ft; T.D., 3,431 ft; may complete as gasser.

Phillips Pet. Co.'s No. 1 W. Jackson (was Clark et al's No. 2) ..... Drlg., 1,905 ft.
Phillips Pet. Co.'s No. 2 W. Jackson (was Clark et al's No. 3) ..... Drlg., 1,785 ft.
Phillips Pet. Co.'s No. 3 W. Jackson ..... Drlg., 585 ft.
Phillips Pet. Co.'s No. 1 Jackson-Riley (was Clark et al's No. 1 W. Jackson) ..... 7,000,000 ft. gas, 2,442-2,545 ft; drlg., 2,710 ft.

Phillips Pet. Co.'s No. 2 Jackson-Riley ..... Drlg., 575 ft.
Pampa Oil Co.'s No. 1 W. R. Campbell, Sec. 90, Blk. 3... 700 ft. water, 3,430 ft; S.D.
Purple Sage Oil Co.'s No. 2 E. B. Johnson ..... Material on ground.
Remo Oil Co.'s No. 1 B. E. McKinney ..... Location.
Rensoul Pet. Co.'s (was Salisbury & Reynolds') No. 1 M. Huselby, C SE NE NE, Sec. 55, Blk. 25, H. & G. N. Sur. ..... Flowing 30 bbls. daily; T.D., 2,950 ft; fish. 2 strings tools.

Shamrock Pet. Co. et al's No. 1 J. B. Back, SE NW SW, Sec. 44, Blk. 25 ..... T.D., 2,335 ft; rig burned and rebuilt; 30,000,000 ft. gas.

Skelly Oil Co.'s No. 1 Bradford, NE cor., Sec. 118, Blk. B-2, H. & G. N. Sur. ..... New location; cellar.
Skelly Oil Co.'s No. 1 W. Jackson ..... Drlg., 1,900 ft.
Skelly Oil Co.'s No. 2 Jackson ..... Drlg., 500 ft.
Spartan Oil Co.'s No. 1 J. Hopkins ..... Building rig.
Sullivan et al's No. 1 A. Chapman ..... Rig on ground.
Sullivan et al's No. 1 A. Chapman-A ..... Rig; moving in tools.
Sun Oil Co.'s No. 1 W. Jackson ..... Rig.
Staggers Oil Co.'s (was Ruby Oil Co.'s) No. 1 B. F. Tally. T.D., 635 ft; S.D.
The Texas Company's No. 1 J. B. Bowers ..... Drlg., 1,100 ft.
The Texas Company's No. 2 J. B. Bowers ..... Spudding.
The Texas Company's No. 3 J. B. Bowers ..... Rigging up.
The Texas Company's No. 1 S. McLarty ..... Cellar.
The Texas Company's No. 4 G. H. Saunders ..... Spudded.
The Texas Company's No. 1 A. Chapman, Sec. 61, Blk. 25. Drlg., 2,545 ft.
The Texas Company's No. 1 W. J. Brown ..... 1,000 ft. wtr., 3,540-45 ft; T.D., 3,630 ft; plug back to 3,320 ft.

I. Williams et al's No. 1 C. W. Bradford, Sec. 123, Blk. B-2 ..... Rig on ground.
Young et al's No. 1 Holmes ..... S.D., 3,352 ft; 2,000 ft. oil in hole (was comp. in Oct., 1926 for 300 bbls. at 3,165-80 ft)

HALE COUNTY

Bailey & Young's No. 1 Thomas, Sec. 1, Blk. J.K.L.... S.D., 175 ft.
Donnell Pet. Co.'s No. 2 Mullican, NW cor. Sec. 66, Blk. A-3, I. & S. B. Sur. ..... Top pay in sandy shale, 405 ft; ½ bailer oil and 3 bailers wtr. per day; S.D., 260 ft.

Donnell Pet. Co.'s No. 1 Mullican, C Sec. 21, Blk. B, R. M. Thompson Sur. ..... 200 ft. fluid in hole from 407-14 ft; S.D.

Explin. Co.'s No. 1 Crawford, C NE, Sec. 17, Blk. C-3, T. T. R. R. Sur. ..... Spudded and S.D.
Explin. Co.'s No. 1 Goodman ..... Spudded and S.D.
A. S. Mimm's No. 1 W. A. Ritcher, 700 ft. from east line and 1,200 ft. from south line, Sec. 17, Blk. X, John Glynn Sur. ..... S.D., 1,140 ft.
Tolbert & Simms' (was Gouldy & Stone's) No. 1 Kitteral, SE cor. NW, Sec. 65, Blk. A-3, G. C. & S. F. Sur. ..... S.D., 485 ft.

HALL COUNTY

Briscoe Oil Assn.'s (was Seifert et al's) No. 1 Owens, C NE, Sec. 179, Blk. S-5, Dennison & Pacific Sur. Spudded and S.D.

HANSFORD COUNTY

Caldwell et al's No. 1 J. Adriance est. ..... Rigged up and S.D.
Oklavania et al's No. 1 Coots, Sec. 13, Blk. 45, H. & T. C. Sur. ..... S.D., 560 ft.

HOCKLEY COUNTY

World Oil Co.'s No. 1 Ellwood ..... Drlg., 1,420 ft.

HARTLEY COUNTY

Deep Rock Oil Co.'s No. 1 Lymann & Balfour, Sec. 9, Balick et al's No. 1 J. R. Irving, Sec. 13, Blk. 13 .. Topped granite wash, 3,103 ft; show oil, 3,226 ft; hole full wtr., 3,745-55 ft; T.D., 3,962 ft., trying to set 5-in.

HEMPHILL COUNTY

Hoover et al's No. 1 Schaller est., Sec. 4 ..... Spudded and S. D.
Hoover et al's No. 1 fee, J. S. Hood Sur. ..... Fish. underreamer, 4,785 ft.

HUTCHINSON COUNTY

R. G. Barnum et al's No. 1 Garland Sanford, Sec. 78, Blk. 46 ..... Rig.
Beam et al's No. 1 Cockrell, Sec. 3, Blk. 23 ..... S.D., 405 ft. for orders.
Big Coach Oil Co.'s No. 1 Dunnaway, Sec. 5, Blk. Y ... S.D., 750 ft.
Conklin et al's No. 1 Johnson, Sec. 1, Blk. X03, H. & O. B. Sur. ..... S.D., 600 ft.
McMan O. & G. Co.'s No. 1 Albert Yake ..... Drlg., 1,400 ft.
Phillips Pet. Co.'s No. 12 Elva-Whittenburg, E. Tomlinson Sur. ..... S.D. for orders, 4,445 ft.
Phillips Pet. Co. & White Eagle O. & R. Co.'s No. 1 Lee Bivins ..... Drlg., 2,770 ft.
Prairie O. & G. Co.'s No. 1 Burnett est. (Clark) ..... Drlg., 2,520 ft.
Prairie O. & G. Co. and Vacuum Oil Co.'s No. 2 Cal Merchant ..... Drlg., 705 ft.
Skelly Oil Co.'s No. 2 Armstrong & Byrd ..... New Location.
Skyrocket Oil Co.'s No. 1 Mrs. R. A. Jameson ..... T.D., 2,700 ft; 10,000,000 ft. gas.
The Texas Company's No. 1 Cockrell-B ..... Drlg., 1,565 ft.
The Texas Co.'s No. 1 T. D. Lewis ..... Cleaning out at 3,020 ft., after shot of 110 qts. at 2,925-85 ft.

Timms et al's No. 1 C. R. Garner ..... Fishing at 185 ft.

KING COUNTY

Humble O. & R. Co.'s No. 1 Pitchfork, Sec. 171, Blk. A-96, John H. Gibson Sur. ..... Drlg., 2,440 ft.
J. L. Pattison's No. 1 Patton ..... Slight show gas, 2,115-30 ft; S.D., 2,920 ft.

LAMB COUNTY

Dan Freel et al's No. 1 Ellwood, CWL, Sec. 9, Blk. T, T. A. Thompson Sur. ..... Rig.
Tolbert & Simms' No. 1 Elwood, NE SW SW, Sec. 14, Blk. B., R. M. Thompson Sur. ..... S.D., 712 ft; small show oil and hole full wtr; bailing.

LIPSCOMB COUNTY

Cal-Tex's No. 1 Bradford, C NE NE, Sec. 899, Blk. 43, H. & T. C. Sur. ..... Spudded and S.D.
Camp Creek Oil Co.'s No. 1 Mrs. H. D. May, Sec. 612, Blk. 43 ..... S.D., 1,400 ft.
McCorkle's No. 1 A. Barton, NE cor. SW SE, Sec. 504, Blk. 43, H. & T. C. Sur. ..... Water in lime at 4,126-40 ft; 8-in. set, 4,155 ft; S.D., 4,330 ft.
Ozark Drlg. Co.'s No. 1 Frass, NE SE, Sec. 106, Blk. 10, H. & T. C. Sur. ..... Rig on ground.
Smith, Kinsley & Ruby's No. 1 C. W. Jones, NE cor. SW, Sec. 100, Blk. 43 ..... Show oil, 3,520 ft; salt water at 3,900 ft; T.D., 4,020 ft; U.R. 8-in.

LUBBOCK COUNTY

Center Oil Co.'s No. 1 Bowles ranch ..... Small show oil, 1,133-40 ft., in sand; drlg., 1,560 ft.

MOORE COUNTY

A. O. Duggan's (was Shadler Bros.') No. 1 John Lowery, Sec. 237, Blk. 44 ..... Topped lime, 2,680 ft; set 8-in. at 2,770 ft; 4,000,000 ft. of gas, 2,-980-3,020 ft; 15,000,000 ft. gas, 3,100-50 ft; (actual gauge); very slight show oil in lime; S.D., 3,652 ft.
Prairie and Shamrock's No. 2 Gober, Sec. 16, Blk. M-21 .. T.D., 2,520 ft; recement 12-in. at 1,525 ft.

MOTLEY COUNTY

Explin. Co.'s No. 1 Burleson ..... Spudded and S.D.
Explin. Co.'s No. 1 Tillson ..... S.D., 750 ft. for repairs.
Explin. Co.'s No. 1 Matador Land & Cattle Co., C SW, Sec. 37, John Gibson Sur. ..... S.D., 1,002 ft.
Wheeler et al's No. 1 C. D. Bird, C NE, Sec. 4, Blk. S, Stephens Sur. ..... Spudded and S.D.

OLDHAM COUNTY

Prairie O. & G. Co.'s No. 1 Landegrin, SE cor. NE SW, Sec. 46, League 310, Capital land ..... 1,900 ft. wtr., 4,085-93 ft; 1 bailer wtr. per hr. and light scum oil, 4,527 ft. (steel line meas.) cmt. 6-in., 4,442 ft; 2,000 ft. salt wtr., 4,850-56 ft; T.D., 4,918 ft; U.R., 5-in.

POTTER COUNTY

Frank Allen et al's No. 1 W. H. Bush ..... New location.
Prairie O. & G. Co.'s No. 1 Lee Bivins, 660 ft. N. and 330 ft. W. of SE cor., Sec. 39, Blk. M-20, G. & M. Sur. ..... Location.

ROBERTS COUNTY

Big Bend Oil Co.'s No. 1 Mrs. H. Ledrick & Sons, Sec. 7, Blk. 5-A ..... Show gas, 4,990 ft; show oil, 4,-992 ft; cas. set, 4,992 ft; drlg., 5,140 ft.

SHERMAN COUNTY

Gibson Oil Co.'s No. 1 Bivins, Sec. 35, Blk. 3-B ..... 100,000 ft. gas, 2,016-26 ft; T.D., 3,353 ft; 2,000 ft. salt water, 3,325-33 ft; U.R., 6-in.
Phillips Pet. Co. and Prairie O. & G. Co.'s No. 1 Price & Fuqua, C NE, Sec. 33, Blk. 2-B, G. H. & H. Sur. .. 100,000 ft. gas, 2,105-10 ft; T.D., 3,420 ft; 2,000,000 ft. gas, 3,325-3,420 ft. lime; rig burned.

WHEELER COUNTY

E. L. Arnold's No. 1 M. J. Williams ..... Show gas, 1,644 ft; T.D., 1,790 ft;
Byrens et al's No. 1 Johnson, SW cor. NE, Sec. 88, Blk. A-5, H. & G. N. Sur. ..... fishing bit.
Clark et al's No. 1 J. W. Gordon ..... T.D., 400 ft; S.D. for 10-in.
Foster et al's No. 1 S. H. McDonald, SE cor. NW SW, J. N. Lindsay Sur. ..... New location; rig.
Hatcher et al's No. 1 J. Hatcher, C NE SW, Sec. 80, Blk. 23, H. & G. N. Sur. ..... Spudded; repaired rig.
Piney O. & G. Co.'s No. 1 W. S. Walker, Sec. 44, Blk. 24, H. & G. N. Sur. ..... T.D., 1,460 ft; 1,000,000 ft. gas, cmt. 6-in.
Rook & Angus'No. 1 Smock (Linkey) C SE SE Sec. 5, Blk. 24, H. & G. N. Sur. ..... Drlg., 300 ft.
Smith Brady et al's No. 1 P. J. Sorenson, Sec. 53, Blk. A-4 ..... Rigged up and S.D.
The Texas Company's No. 1 Morgan, Sec. 92, Blk. 17 .... S.D., 2,120 ft. for orders.
The Texas Company's No. 2 Morgan ..... 21,000,000 ft. gas, 1,850-2,017 ft., S.D.
Vaughan et al's No. 1 M. Ackley ..... Cellar.
Pete Woodley's No. 1 J. Boyle ..... Location.
Rig.

TEXAS JOBBERS WOULD STOP PRICE CUTTING

(Continued from Page 37)

it and not at cost to attract new business. It has also served to take business away from the accessory dealer who operated a curb pump, it was pointed out.

The representative of that company declared the general public does not want cheap gasoline but wants a fuel that will give good results and is willing to pay a fair price for it. He added that a better feeling of good will was created when the company paid a man to do nothing but make visits to each of its stations and check each car to determine whether or not it needed rear end grease. In addition to the good will created that man's services netted the company around $125 a month. The company operating its stations under such a plan found that 50 per cent of its gross service station sales were for products other than gasoline.

Fighting Price Cutting

During the discussion it was brought out that the Fort Worth independent retailers successfully maintained a fair price and slowed down price cutting by periodically giving away an automobile. Tickets were given for each gallon of gasoline purchased and at stated times an automobile was given to the holder of a ticket whose number corresponded to one drawn from a bowl. Each drawing attracted thousands which gave evidence to the interest created. Sales increased and while major companies service stations sales slumped to some extent they were made up in increased sales to the independent stations.

The legality of such a system was questioned and its success in small communities was debated lengthily. The discussion was followed by another as to whether a retailer should make such offers to attract new business or stave off the drives of the price slashers.

L. E. Green, secretary of the association, said low prices would prevail so long as there was an overproduction of crude. He was of the opinion that the giving of premiums was uneconomic and would not have a lasting effect. Trade derived in such a manner would patronize a station so long as they were satisfied with the premiums and not be particularly interested in the service.

His remarks were more along the line that retailers should build up business through superior service and on merit. "We are spoiled in the oil business because we expect a business that will permit us to buy a high-priced car one week after a station has been opened. The business should be sound and healthy and built up accordingly."

At the closing session today, J. B. Russ of the Consolidated Oil Co., Houston, was elected president. Other officers elected were: First vice president, C. A. Slimp, Pioneer Oil & Refining Co., San Antonio; second vice president, W. M. Harrison, Star Refining Co., Fort Worth; and L. A. Greene, Radio Petroleum Co., Fort Worth, was re-elected secretary.

Prior to the closing of the meeting, a short discussion concerning the 3-cent gasoline tax in Texas was heard by members. The association is opposed to the tax except for the purpose of building and maintaining roads. An effort is being made by the association to eliminate the tax so far as government sales are concerned in order to put competition in that direction on a parity with Oklahoma refiners. The latter are not affected by the tax when selling to government agencies, while Texas refiners must pay the 3-cent tax.

During the close of the afternoon session the 14 members of the board of directors were elected and are as follows: R. N. Mullin, Calumet Oil Co., El Paso; C. V. Millican, Panhandle Refining Co., Wichita Falls; R. R. Russell, Russell Oil Co., San Antonio; Floyd Casey, Home Oil Co., Waco; C. A. Slimp, Slimp Oil Co., San Antonio; J. B. Russ, Consolidated Oil Co., Houston; L. A. Greene, Radio Petroleum Co., Fort Worth; W. M. Harrison, Star Refining & Producing Co., Fort Worth; J. C. Gaither, Gaither Oil Co., Fort Worth; A. M. Lockhart, Rio Grande Oil Co., El Paso; A. B. Slimp, Pioneer Oil & Refining Co., San Antonio; W. C. Gaylor, Gaylor Oil Co., and V. H. Anderson, Savage Oil Co., El Paso.

Late Fields

(Continued from Page 44)

cent b.s. Sand was found at 2,898 feet, total depth 2,902 feet.

In Smith County, the Gulf Production Co. abandoned No. 1 Morgan, on the Moore Survey, at 531 feet, after drilling 4 feet into salt.

In Anderson County, Josh Cosden and others' No. 1 Douglas, Simpson Survey, was abandoned at 4,832 feet in limestone. It found no commercial signs of oil or gas on the way down.

WEST TEXAS

FORT WORTH, Tex., Nov. 22.—Marland Oil Co.'s No. 5 Yates-A, in the northwest corner of their lease, Section 60, Block 1, Pecos County, flowed 110 bbls. in 14 hours through 10-inch hole at 620 feet. This well is just 1,000 feet northeast of Mid-Kansas Oil & Gas Co.'s No. 2 Yates-C, and is acting similar to that gusher at the shallower level.

In Upton County, The Texas Company and Cordova Union's No. 1 Union Land has 1,000 feet of oil in the hole at 2,268 feet, 10 feet in the best pay. This well swabbed 60 bbls. in 36 hours.

It is said a report compiled by engineers for the proration committee in the Yates Pool, Pecos County, estimates about 10,700 acres in the productive area now and believes the average per acre recovery will be 50,000 bbls. Some will run as low as 10,000 bbls. and some as high as 120,000 bbls. to the acre. Of course the quantity they estimate is with the provision that it all depends on how the wells are produced. Estimates range from 250,000,000 to 500,000,000 bbls. total recovery.

Kirby & Edson's No. 1 Tippett, northwest of Yates Pool in Pecos County, has show of oil at 1,270 feet and is cementing 6-inch; total depth 1,274 feet. Allsman & Bell's No. 4 River Bed is flowing 425 bbls., no water, at 840-1,040 feet. Roxana's No. 2 Tippett increased to 170 bbls. an hour at 1,521 feet. Red Bank Co.'s No. 2 Smith, southwest extension, flowing 10 bbls. hourly at 1,-628 feet. In Winkler County Humble's No. 4 Hendricks is flowing 145 bbls. hourly at 2,866-96 feet. Southern Crude Co.'s No. 1-F, in Section 33, flowed 2,-516 bbls. Monday while drilling at 3,-020 feet. Its No. 3-C, in same section, flowed 500 bbls. at 2,955-85 feet.

In Gray County, Texas Panhandle-Danciger's No. 3 Jackson flowed 3,185 bbls. of 44.3 gravity oil first 20 hours from pay at 2,940-48 and 2,955-66 feet corrected.

NATURAL GASOLINE QUOTATIONS LOWER

(Continued from Page 32)

gasoline prices over the latter part of this year are not willing to carry these stocks longer in view of the continued weakness in gasoline. There has been some export buying of gas oil along the Atlantic Coast and some material is being moved from the Mid-Continent as furnace oil, but except for these two outlets, the market is very quiet.

Lubricants have shared in the general weakness but prices are unchanged with few exceptions. Compounded oils are moving out at a fair rate but there is a very limited shipment of neutrals in car lots. Those refiners selling neutrals in car lots are forced to compete with South Texas lubs and prices on the latter have been held extremely low. Wax has remained unchanged with shipments to domestic consumers representing the bulk of the business.

Retail Gasoline Situation

The weakness in the refinery market is but a reflection of the highly competitive conditions existing in the retail market, particularly gasoline. The discounts and rebates being allowed in the retail market are finding their way in to the refinery market as well. A combination of the retail and refinery sales is also being practiced. This is particularly true in the Chicago district, where outside refiners have established large bulk stations. These outside refiners are meeting the competition of the Chicago refiners by selling gasoline from their bulk storage at the same price as the Group 3 price plus freight. This has eliminated any margin for handling or profit at the bulk station. Similar concessions are being made in the form of discounts of from an eighth to 1 cent below the prices generally published in trade publications and such practices can not help but reveal the weakness in the refinery market.

Gasolines and Naphthas

Not since the middle of August has the price on the U. S. Motor grade of gasoline varied enough to change the general price range of 6 to 6¼ cents. From time to time the demand picked up sufficiently to allow refiners to get an eighth of a cent above this low and at other times a few sales were reported at 5⅞ cents but these changes reflected only the day-to-day fluctuations. The low endpoint grades have consistently been in greater demand than the U. S. Motor grade, but their prices remain the same. Naphthas continue to move at a slow rate but with natural gasoline prices weakening, naphthas are receiving a little more attention as blending stock.

Kerosene and Distillates

The 41-43 grade of kerosene generally sold at 4½ to 4¾ cents, but a few sales were reported at 4⅝ cents. Material for resale was readily available at that price. The 42 grade was more stable and remained unchanged over the week. Distillates proved more popular, the regular untreated 38-40 distillate selling at 3 to 3⅛ cents, the low flash untreated selling at 3⅛ to 3¼ cents and the treated low flash material at 3½ cents. Low cold test and low flash heavy distillates suitable for furnace oil use sold at prices ranging from 2¾ to 3 cents.

Natural Gasolines

The continued high rate of production of the cheaper grades of natural gasoline so weakened their market position that still lower prices seemed probable. There was a scarcity of the strictly A grade and its price at 5¾ cents was maintained but the AA and lower grades were available at an eighth to a half a cent under last week's prices. The cooler weather has not only increased the total production but has thrown most of the normal grade A production into grade AA as more of the lighter fractions remained in the production to raise the gravity above the limit. Inquiries were being made by a large purchaser and producer on Grade C but this did not stop the market from going to 5 cents and some material was being offered slightly below this.

Fuel Oils and Gas Oil

The continued fair movement of the low cold test fuels and gas oils was the only encouraging factor in these markets. The heavy regular refinery fuel was very weak at last week's prices and there was every indication that added weakness will develop as a result of the lower crude prices being posted on Smackover fuels and the oversupplied bunker fuel oil mar-

ket. The 14-16 gravity fuel was available at 70 cents and there was little attention paid to price on the various gravity fuels up to 22 gravity. This entire range sold at 75 to 80 cents.

The gas oil market moved in sympathy with fuel oils, and while the general market quotations were being maintained at 2½ cents, there was some material moved at 2⅜ cents.

Lubricants and Wax

Neutrals were generally weak with most of the production going out as compounded oils. Bright stocks were very weak and the 150-160 D colored oil could be bought at 24 cents. The E colored oil was available as low as 22 cents. The weakness of the bright stock market was not reflected in the cylinder stock market, however. Wax sales were restricted to domestic consumers and the general market remained unchanged.

RIPARIAN OWNERS WIN CIMARRON RIVER CASE

The supreme court of the United States has refused to review the appeal from the circuit court, upholding the riparian owners in the Cimarron river bed case, involving $5,000,000 to $10,000,000 in oil properties along the Cimarron river in the Cushing field.

The controversy has raged since December, 1913, the Creek Indian tribe claiming that oil from the river bed belonged to the tribe instead of the allottees on the north and south banks of the river.

Judge R. L. Williams held that the oil royalties belonged to the allottees. The circuit court upheld the district court.

More than $2,000,000 in impounded royalties is awaiting distribution to the 100 allottees as soon as the case is definitely settled, according to the receivers. Title to further royalty payments is estimated in value from $5,000,000 to $10,000,000.

The refusal of the supreme court to review the circuit court's decision does not settle suits for accounting now pending, it is said.

These suits do not involve the question of ownership, as between the allottees and the Creek nation, but between allottees and the oil companies producing on the properties. These suits must be settled, it was explained, before some of the moneys would be paid by the receivers.

A 5,500-FOOT TEST IN ALLEGANY FIELD

A 5,500-foot test will be drilled in the Allegany Field in western New York. The Belmont Quadrangle Drilling Corp., financed by oil men in the Bradford and Allegany Fields, will drill the well on the Gilbert farm, Wirt Township, Allegany County, New York. The company is capitalized at $100,000 and its officers are George H. Bradley, Bolivar, N. Y., president; John Messer, Bolivar, vice president; Raymond Brennan, Bradford, Pa., secretary and treasurer. Bradley and Messrs. Forest D. Dorn of Bradford and J. H. Lester of Richburg, N. Y., directors. About 3,000 acres have been leased in Bolivar and Wirt Township.

The deepest well ever drilled in that part of the United States is at Lamont, near Kane, McLean County, Pennsylvania, which is drilling at 6,605 feet. This well is about 50 miles southwest of the proposed deep test in Wirt Township.

SHREVEPORT SUPER STATION

SHREVEPORT, La., Nov. 19.—Louisiana Oil Refining Corp. is building its thirty-second service station in Shreveport on the site of the Kenova Hotel, a landmark of old Shreveport, at Market and Travis Streets, across the street from the Youree Hotel, and expects to have it in operation by December 1. The station will cost $15,000 and have seven pumps, two greasing and wash racks, air meters, rest rooms and all other features of a modern super station.

LARGE ORDERS PUT PIPE LINE INDUSTRY IN IMPROVED SHAPE

By B. E. V. Luty

PITTSBURGH, Pa., Nov. 21.—Placing of the Amarillo-Denver natural gas line, noted in last report, was followed by the buying of about 70,000 tons of 6, 8 and 10-inch line pipe by the Roxana Petroleum Corp. for a supplementary oil line. The Amarillo gas line involving about 100,000 tons, went to the National Tube Co., while it is understood the Roxana business was divided between two independents. These orders place the whole pipe industry in better shape. There are possibilities of some other natural gas line orders being closed in the near future.

Demand for casing and other well material is light, in accordance with the season, but there is some movement. Demand for standard pipe has decreased somewhat. Normally, demand keeps up fairly well through November, while December and January are light months.

The large tonnage of line pipe placed, say 170,000 net tons, is equal to about two-thirds the monthly production of all welded tubular goods at the rate of the past few months. Deliveries are well spread out, but the business helps to prevent operation of the pipe mills dropping further, production being at about 50 per cent of full capacity, though the operation is nominally figured at above 50 per cent.

Pipe Market Stabilized

It is positively declared in the pipe trade that the gradual increase in trimmings on oil country goods and standard pipe which recently came out in the open have fully stabilized the pipe market so that no further weakening is expected. The increased discounts are being given to the trade generally and are being adhered to. The decline occurred, according to the analysis of mills, by one or more mills some time ago giving increased discounts to some of their jobbers and the jobbers in turn handing the advantage to their customers, other mills being compelled to recognize the situation.

In the steel market as a whole the price outlook has been materially improved by an advance of $1 a ton, from 1.75 cents to 1.80 cents in bars, shapes and plates. This occurred through the Carnegie Steel Co. taking the initiative, announcing the advance, and other large mills following. The advance merely balances a recent decline, so that the market is not up as compared with levels earlier in the year, but the trend is reassuring to steel producers generally, who were fearful of the outcome in a market which had been losing a little strength from time to time in one quarter or another.

Better Sheet Demand Expected

The sheet market has had no stiffening, but it does not seem to be any easier than a week ago, and hopes are entertained that increased demand for automobile sheets will come soon, which ought to help the whole sheet situation. December is regularly the light month of the year in automobile production, with a sharp increase in January, and it takes three weeks to make automobile sheets, so that heavier demand should come very soon.

At the various steel plants operations vary from week to week, but the general average shows little decline this month. There was virtually uniform production of steel in the four months, July to October, inclusive, making a remarkable record for steadiness. This month and next production would naturally decrease somewhat, seasonally, but it is not clear that there is any decrease. All precedents indicate a seasonal increase in steel production immediately after January 1.

The valley pig iron market remains dull, but some slight signs are appearing of consumers getting ready to negotiate. Prices are unchanged, but in such a dull market are largely nominal, at $18 for Bessemer, $17 for basic and $17.50 for foundry iron, f.o.b. valley furnaces. Connellsville coke is a shade easier, with $2.75 to $3 quotable on furnace grade. Forging billets are $38 to $39, Pittsburgh, with $5 extra for guaranteed.

USE OF FUEL OIL BY RAILROADS LESS

(Continued from Page 128)

angle to the problem involving the future use of oil, namely, the development of the Diesel locomotive and the oil-electric locomotive.

During 1926, 11 oil-electric locomotives were placed in service and one in April, 1927. The oil-electric locomotive comprises a generator and storage battery unit operated by a Diesel engine. Accordingly, on April 30, 1927, twelve 60-ton, 300-horsepower, and three 100-ton, 600-horsepower locomotives of this type were in use. Thirteen of these were in switching service in New York, Philadelphia, Chicago, and St. Paul; one in Utah copper mining operations; and one employed by a California lumber company. Four more oil-electric locomotives were under construction at the end of April, 1927, one 145-ton, 750-horsepower; two 100-ton, 600-horsepower, and one 60-ton, 300-horsepower locomotive.

Manufacturers are experimenting with the construction of larger, more powerful oil-electric locomotives. One company was building in May, 1927, an experimental 1,000-horsepower oil-electric locomotive, using a 6-cylinder, 4-cycle Diesel engine. A second manufacturer is working on a locomotive with a 12-cylinder, 4-cycle engine rated at 960 horsepower at 325 revolutions per minute. Three other companies are working on locomotives with a 6-cylinder, 4-cycle engine rated at 750 horsepower at 500 revolutions per minute. One railroad company has designed a new type of Diesel locomotive and is building three of these locomotives in its own shops.

NORTH AND WEST TEXAS

(Continued from Page 44)

Pure Oil Co.:		
Chalk & Hooks	4	311
Reeves & Apperman:		
H. R. Clay	2	80
Sweeney et al:		
Chalk	1	150
Tidal Oil Co.:		
Otis Chalk	2	50
Totals, Howard County	102	4,466
Average per well		44
Jones County		
Atlantic O. P. Co.:		
Howell	1	3
Mariand Oil Co.:		
Mason	3	337
Midwest Expl. Co.:		
Thornton	4	158
Phillips Pet. Co.:		
Tessie-Walling	4	243
Joe Winter	3	276
R. M. Beasley	1	70
J. C. Mason	1	150
H. B. Vestal	1	80
Stebbins Oil Co.:		
Higgs	1	15
Totals, Jones County	19	1,332
Average per well		70
Loving County		
Lockhart & Co.:		
Allen	1	77
Mitchell County		
Atlantic O. P. Co.:		
Womack	8	225
California Co.:		
All leases	96	2,481
F. J. Carey:		
E. Morrison	1	20
Eastland Oil Co.:		
All leases	9	178
Magnolia Pet. Co.:		
All leases	23	498
Tidal Oil Co.:		
Both leases	2	30
Totals, Mitchell County	138	3,432
Average per well		25
Pecos County		
California Co.:		
Yates	4	8,943
Smith	3	2,688
Totals, California Co.	7	11,631
Gulf Prod. Co.:		
M. A. Smith	1	269
Humble O. & R. Co.:		
M. A. Smith	2	725
Marland Oil Co.:		
Yates-A	4	863
McMan and Marland:		
Yates	7	3,529
Mazda Oil and Savoy Oil:		
Smith	1	93
Mid-Kansas and Transcontinental:		
Smith-Taylor	2	1,575
Yates-A	7	5,983
Yates-B	6	4,260
Yates-C	2	693
Yates-D	1	2,485
Totals, Mid-Kansas and Transcontinental	18	14,996
Red Bank Oil Co.:		
Smith	1	31
Roxana Pet. Corp:		
Smith-A	1	288
Tippett	1	575
Totals, Roxana Pet. Corp.	2	863
Simms Oil Co.:		
Smith	2	2,678
Texon O. & L. Co.:		
Yates	1	0
Totals, Pecos County	48	36,063
Average per well		751
Reagan County		
Big Lake Oil Co.:		
University	122	17,420
Texon O. & L. Co.:		
University	79	5,306
Totals, Reagan County	201	22,726
Average per well		113
Runnels County		
Ladd, Sillix et al:		
McMillan	1	100
Scurry County		
Northwest Oil Co.:		
All leases	5	45
Upton County		
Amerada Pet. Corp.:		
Hughes	6	315
Atlantic O. P. Co.:		
Sherk	1	36
Bryant and Atlantic:		
Baker	2	44
Champlin O. & R. Co.:		
Lane	2	627
Dixie Oil Co.:		
Burleson	26	1,996
Hughes	10	205
Gulf Prod. Co.:		
All leases	18	2,587
Humble O. & R. Co.:		
Burleson	4	24
Ricker	6	819
Independent O. & G. Co.:		
Burleson, Wooley & Taylor	26	661
McMan O. & G. Co.:		
Baker	2	28
Marland Oil Co.:		
All leases	75	2,321
Paxton, R. H. (Orient):		
K. C. M. & O.	1	152
Prairie O. & G. Co.:		
J. F. Lane	4	728
Allie Lane	4	652
Pure Oil Co.:		
Lane	1	72
Republic Prod. Co.:		
Baker	6	111
Roxana Pet. Corp.:		
Bowen	26	1,731
Estep	3	45
Hughes	10	289
Simms Oil Co.:		
Shirley	3	39
Snowden & McSweeney:		
Hughes	1	200
Sun Oil Co.:		
Burleson & Taylor	10	205
The Texas Company:		
Burleson	4	38
King	12	362
Perry	3	923
Texon O. & L. Co.:		
Sherk	1	19
Tidal Oil Co.:		
Hughes	1	74
Burleson	2	19
Texas Pacific C. & O. Co.:		
Burleson	1	21
Sherk	4	112
Lane-A	10	2,544
Lane-B	1	23
Wentz Oil Corp:		
Sherk	3	118
White Eagle O. & R. Co.:		
Hughes	1	15
Totals, Upton County	290	18,155
Average per well		62
Winkler County		
Hendrick Pool		
Cranfill & Reynolds:		
Ida Hendrick	1	4,272
Gulf Prod. Co.:		
T. G. Hendrick	4	*1,567
Independent O. & G. Co.:		
Hendrick	1	35
Landreth and Roxana:		
Hendrick	2	*1,941
Murchison & Cranfill Brothers:		
Hendrick	2	160
Grisham-Hunter-C	1	200
Pure Oil Co.:		
Grisham-Hunter	1	*807
Southern Crude O. P. Co.:		
T-67 Hendrick-A	1	302
T-67 Hendrick-C	2	700
3-T-67 Hendrick-A	1	5
T-88 Hendrick-A	-	866
T-88 Hendrick-B	1	5,094
Totals, Southern Crude	6	6,967
Texon O. & L. Co.:		
Grisham-Hunter-A	1	570
Totals, Hendrick Pool	19	16,519
Roxana Pet. Corp. and Llano:		
Scarborough	1	20
Totals, Winkler County	20	16,539
Average per well		827
Grand totals, West Texas	1,098	216,918
Average per well		197

†Shut down for storage.
*Production partially pinched.

CLOSES SHREVEPORT OFFICES

SHREVEPORT, La., Nov. 19.—Effective December 1, the land department of the Amerada Petroleum Corp.'s offices here will be closed, G. W. Gammill, head of the department, has been advised. The company will, however, keep its geological department representation here. The Amerada established headquarters in Shreveport during the Homer-Bull Bayou boom in 1919-20.

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired. letters.

Questions involving patented processes, intricate formulas and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

ACTIVATED CHARCOAL PREPARED BY SPECIAL METHODS

Is the activated charcoal, used for the extraction of gasoline from natural gas a selected charcoal made in the ordinary way or is it produced by special methods?—N. P. C.

Activated charcoal is a special charcoal which is made from selected material under carefully controlled conditions. The first charcoal of this kind was made under the direction of the Chemical Warfare Service for use in gas masks. It was found that the most powerful charcoal was that made from peach seeds, and other fruit pits, and cocoanut shells. A description of the process may be found in Chemical Warfare by Fries and West, page 242, etc.; also in Recovery of Gasoline from Natural Gas, by Burrell. The outline given below is from the latter.

The preparation of activated charcoal may be shown to involve two steps. The first of these is a process of destructive distillation at low temperatures so that large quantities of inactive carbon will not be made through the cracking of gums, liquids and other hydrocarbons. These inactive carbons would be formed if high temperatures were permitted. The material is charged into the retorts in thin layers, so that the contact of the hydrocarbon vapors with hot charcoal is avoided as much as possible. Most of the hydrocarbons are removed before dangerous temperatures are reached.

The second step has for its object the removal of absorbed hydrocarbons. This is accomplished by combined oxidation and distillation, whereby the hydrocarbons of high boiling points are reduced to more volatile substances which are easily removed at a lower temperature. The charcoal is deposited in thin layers and rapid gas currents are used so that contact between the volatilized hydrocarbons and the hot active charcoal may be as brief as possible.

A high enough temperature must be maintained to oxidize the hydrocarbons with reasonable speed, but too high a temperature must not be used else the primary carbon will be unduly consumed. The permissible range is a relatively narrow one, only about 50 to 75 degrees Centigrade. The optimum activating temperature varies with the oxidizing agent; for air it is somewhere between 360 and 450 degrees, and for steam between 800 and 1,000 degrees Centigrade.

Recently many patents have appeared which propose various special methods for making activative charcoal. The Urbain process makes use of a solution of zinc chloride containing hydrochloric acid for the extraction of the base material. After drying and heating the residue is washed with hydrochloric acid and heated to about 800 degrees Centigrade. Another process reduces a mixture of carbon and acid calcium carbonate at a suitable temperature. Others propose the use of tricalcium phosphate to be used in the presence of free phosphoric acid. A German patent described a process in which the raw material, such as wood, is saturated with sodium bisulphate, and, after drying, then to heat the wood without the presence of air, to about 1,000 degrees Centigrade. The residue is then cooled and washed with water to get rid of the soluble salts, especially sodium sulphide. The charcoal must be heated again to dryness.

ANALYSES OF WEST TEXAS OILS

We would like to have an analysis of the oil produced in West Texas, such as the Winkler Pool, etc.—A. M. A.

You will find an article on page 40 of the November 17 issue of The Oil and Gas Journal which reports the composition of a number of crude oils that were produced in different parts of the West Texas district. The district is a very large one and the quality of the different oils seems to vary to such an extent that an average analysis would be of little value.

VALUE OF PANHANDLE OIL

Does the lower price of Panhandle crude sufficiently allow for the increased cost due to corrosion? Is there available an actual statement of cost for refining Panhandle crude, for example, over against other crudes of the same specifications, but without the sulphur and salt water?—M. H. G.

A discussion of the comparative value of the Panhandle crude and crudes of similar gravity was given by Walter Miller before the Tulsa meeting of the American Petroleum Institute, which was published in The Oil and Gas Journal, December 9, 1926, page 40-B. He made the following statement:

"We have been asked many times our opinion as to the comparative value of Panhandle with crudes of similar gravities of average Mid-Continent type. We won't know actually for a long time. There are too many undeterminable factors to warrant any attempt to more than roughly estimate the difference in value to refiners. True, we can say how much our corrosion combating chemicals are costing, but we don't know yet whether we are using the right amount. We can calculate the extra cost of treating the refined products, but there is no way of determining as yet the cost, or measuring the rate of, depreciation of our equipment.

"We have made several attempts to estimate this figure, taking into consideration the following factors: That of lower gasoline content than average crude of the same gravity; unavailability as a lubricating oil source; extra cost of combating corrosion and of treating products, our best guess as to the rate and the cost expressed in money, of loss of capacity due to extra shutdowns. Our figures have ranged from 23 to 28 cents per barrel less value to the refiner delivered at his plant. We believe that 25 cents is as fair a figure as can be arrived at today."

The price for Panhandle crude—Hutchinson, Carson and Wheeler Counties—is now 75 cents a barrel. The wells are so far apart and there appears to be such a wide fluctuation in the production, that it is difficult to arrive at an accurate average gravity; however, probably 36.5 would be approximately correct. The same gravity sweet Oklahoma oil is quoted at $1.28, which is a difference of 53 cents. Subsequent experience and investigations have indicated that a differential of from 30 to 40 cents a barrel would be reasonable for the added refining costs. The distance from the large markets, the necessary freight allowance on the products, and the high cold test of the fuel oil are contributing factors which lower the value of the Panhandle oil.

ADDITION OF ACID IN STAGES WHEN TREATING

Why does the addition of acid in several batches, when treating kerosene, produce a better product than when all of the acid is put on at once?—H. E. A.

It is generally known that a better result is obtained when acid is added in several portions for the purification of various petroleum products, such as kerosene and lubricating oil, than when the entire quantity of acid is added to the oil at one time. After the addition of the acid the sludge should be permitted to settle and drawn off before another portion is added. The treatment in stages produces a better product both as to color and gravity. Experiments have indicated that when the concentrated acid is added in one lot the A.P.I. gravity may be lowered over 2 degrees when compared with the product obtained by applying the acid in several stages and withdrawing the sludge each time.

Fractional addition of the acid causes the formation of larger quantities of the sulphonic acids than when the single addition is made. Just why this is so we do not know; but it appears that the action of the acid on the unsaturated compounds, aromatics, asphaltic bodies, etc., may proceed in several steps. There are compounds separated from the product in the first reaction which unite with some of the excess acid, in the case of the one addition of the acid. This is a waste of acid because the acid is not reacting with the petroleum oil but is being spent upon chemical changes in the substances already separated from the material which is being treated.

Addition of the sulphuric acid in several stages has the further advantage that sudden and great elevations of temperature do not occur, which in turn cause a loss of the lower boiling fractions and frequently a burning or setting of objectionable color compounds.

The condition of the product with respect to the presence of so-called mechanical impurities, for example, water and suspended matter, has much to do with the action of the first portion of acid which is used. It is the common practice to use a small quantity of acid in the first place for the removal of these substances, especially the water.

MANUFACTURE OF METHANOL OR WOOD ALCOHOL

It has been stated to me that alcohol is now being made from the air. If you have the information about this, will you kindly give me the particulars? What is the cost of making wood alcohol by this process? Is it considered to be of value as a motor fuel?—K. I. L.

The manufacture of methanol, or wood alcohol, as it was formerly called, has been begun by American companies within the past year. Methanol was first manufactured in Germany and began flooding the American market two years ago to the disconfiture of the wood distillers, whose process was much more costly. According to D. H. Killeffer, associate editor of Industrial and Engineering Chemistry, the American chemists have found a method of making methanol more economical than that of the Germans, because they produce methanol as a by-product of other valuable materials.

One American company makes methanol in the course of manufacturing synthetic ammonia. The oxygen is taken from the air by being passed over coke. The oxygen and the carbon of the coke form carbon monoxide. The remaining nitrogen is combined with hydrogen to produce ammonia. The carbon monoxide formerly was waste product; now it is forced into combination with hydrogen by means of a catalytic agent whose nature is kept secret. This combination is methanol, expressed chemically as CH_3OH.

It has been estimated that the cost of making synthetic methanol is about 20 cents a gallon.

There have been some claims advanced to the effect that methanol has shown excellent performance as a motor fuel. Paul Dumanois, of the French Air Service, has reported the results of actual runs, indicating that methanol is free from knocking and is capable of developing great speed in a high compression motor. The market price is too high when compared with gasoline in the United States, but in countries where much higher prices are prevailing there appears to be opportunity to use the alcohols, and especially methanol, for motor fuel.

FUEL OIL CONSUMED BY STEAMSHIPS AND LOCOMOTIVES

Can you furnish the following information: Total annual consumption of fuel oil; quantity of oil burned by steamships; quantity used by oil-burning locomotives; rate per mile consumption by steamers and locomotives?—S. P.

The total consumption of fuel oil for the year 1925 was 410,958,000 bbls. of which 65,000,000 bbls. was crude oil. Merchant vessels for the same year used 74,000,000 bbls. and the United States Navy 6,300,000 bbls. The railroads of the United States used 65,000,000 bbls., of which 59,355,000 was reported to have been used for steam-making purposes.

Two vessels sailing between San Francisco and Australian ports consumed 19,000 to 21,500 bbls. of oil on the round trip, a distance of 13,475 miles. Averaging this quantity, or 20,250 bbls., the per mile consumption appears to be slightly over 1.5 bbls. The Leviathan requires 35,000 to 40,000 bbls. from port to port, a distance close to 3,000 miles; this is equivalent to over 11.6 bbls. to the mile. The first vessels mentioned were rated at 15½ knots per hour; the Leviathan has attained a speed of 28 knots an hour.

The conditions surrounding the fuel consumption by locomotives are so varied and complicated that it is impossible to reduce the rate to a mile basis. The Bureau of Railway Economics published the following: "In freight service the amount of fuel consumed per 1,000 gross-ton miles was 159 pounds in 1925, a decrease of 38 pounds under 1920 and 11 pounds under 1924, the next best year. In passenger service the amount of fuel consumed per passenger train car-mile in 1925 was 16.1 pounds, a decrease of 2.7 pounds under the average of 1920, and 0.9 of 1 pound under 1924."

Length 41 feet. Inside diameter 7 feet. Wall thickness 3¾ inches. Weight 147,900 pounds.

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Smithsteel Cracking Stills can be built to any diameter and length within transportation limits—and in any wall thickness within steel mill capacity.

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Every Smithsteel Vessel is tested not only with reference to operating conditions but is subjected to pressures which may be three or four times as great as those which the vessel will encounter in actual operation. These tests are invariably made in the presence of purchasers' representatives.

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Smithsteel Cracking Stills do cost more than vessels made by some other methods. The extra cost is the price of safety.

347 STILLS

—accurate to 1/8 of an inch in diameter

in lengths varying from 32 to 46 feet

To date, the A. O. Smith Corporation has built 347 cracking stills which provided for operation of revolving coke removal apparatus. These stills vary less than ⅛ of an inch in diameters from 5 feet to 6 feet and in lengths from 32 feet to 46 feet.

This accuracy was not secured by special means. It is the standard of accuracy to which *all* Smithsteel Cracking Stills are built.

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Of Interest to Sales Departments

MARKED INCREASE IN OIL EXPORTS SHOWN IN AUGUST OVER JULY

A marked increase was shown in the exports of most refined oils from the United States over August compared to July, according to statistics just compiled by the Bureau of Foreign and Domestic Commerce. Canada continues to be the principal importer of United States crude, the imports during August amounting to 1,199,856 bbls., which represents an increase of about 300,000 bbls. over July.

The export of gasoline increased approximately 35 per cent, the increase being in the bulk shipments, as the case shipment declined. Kerosene exports increased about 200,000 bbls. in bulk and 100,000 bbls. in containers. The United Kingdom took a great share of this increase, these exports amounting to 192,445 bbls. in July and 338,115 bbls. in August. China ranked second, practically all of the material being shipped in cases.

A material increase is seen in the shipments of gas oil and fuel oil as Russia came into the market in August taking nearly 700,000 bbls. The exports of lubricating oils decreased. This was due entirely to the lesser shipments of pale and red oils. The United Kingdom, Germany and France have been the principal buyers and the shipments to these countries were practically cut in half during August. Grease shipments increased about 2,000,000 pounds, considerably more going to Australia and Germany. Wax exports also increased materially especially the unrefined grade. A greater share of this increase is in the material going to the United Kingdom.

Major Countries Importing Petroleum and Its Products from the United States During August

Crude Oil

Country—	Bbls.
Canada	1,199,856
Japan	82,076
Cuba	65,344
Argentine	32,798
Mexico	1,922
Total	1,381,996
Value	$2,600,317

Gasoline, Naphtha and Other Light Products

	Bulk Bbls.	Containers Bbls.
United Kingdom	1,275,900	121
France	455,249	.....
Canada	328,302	4,204
Netherlands	216,810	.....
Spain	189,035	.....
Australia	171,137	52,783
Italy	161,934	5
Belgium	160,870	.....
New Zealand	114,897	31,656
Denmark	80,444	.....
All others	611,964	264,461
Total	3,766,542	353,230
Value	$14,461,932	$2,940,890

Kerosene

Country—	Bbls. Bulk	Bbls. Containers
United Kingdom	338,115	.....
Netherlands	151,683	83
Belgium	127,199	36
Germany	117,675	.....
China	96,164	175,251
France	90,767	60
India	80,512	10,180
Algeria	24,301	20
Portugal	22,092	.....
Finland	14,923	.....
All others	97,951	322,257
Total	1,161,382	507,887
Value	$2,964,189	$3,141,529

Gas Oil and Fuel Oil

Country	Bbls.
Russia	698,565
Argentine	641,309
United Kingdom	459,007
Chile	480,413
Panama	313,299
Canada	241,726
Germany	199,085
Cuba	192,242
Denmark	159,180
New Zealand	148,293
All others	840,706
Total	4,373,825
Value	$4,559,377

Lubricating Oils

Country—	Pale and Red	Black Oil	Cylinder Stock
United Kingdom	70,893	1,329	61,677
Germany	57,435	.....	29,650
France	40,740	28,793	49,898
Canada	28,556	1,102	11,325
Belgium	25,003	14,902	5,633
Argentine	17,376	1,658	13,602
Japan	16,222	1,727	7,275
Australia	14,934	5,738	28,878
India	10,403	2,358	4,635
Netherlands	9,216	65	9,279
All others	84,320	10,336	74,878
Total	375,099	68,008	296,730
Value	$3,500,355	$308,771	$3,380,922

Grease

Country—	Lbs.
United Kingdom	1,270,798
Australia	930,601
Germany	784,556
Japan	781,279
Chile	623,663
Argentine	466,131
Canada	440,074
Belgium	417,245
Brazil	390,608
France	276,319
All others	2,822,624
Total	9,203,898
Value	$479,917

Paraffin Wax

Country—	Unrefined Lbs.	Refined Lbs.
United Kingdom	5,128,221	6,290,279
Argentine	4,462	2,011,420
Mexico	1,349,753	1,980,848
Belgium	100,417	1,933,671
Spain	55,115	1,865,877
Germany	367,933	1,552,519
Italy	451,638	1,547,968
Irish Free State	433,577	1,132,935
China	113,123	903,125
Netherlands	367,756	640,293
All others	1,461,562	4,536,233
Total	9,833,557	24,395,168
Value	$340,091	$1,088,696

MEXICAN GAS TAX INCREASES

MEXICO CITY, Mexico, Nov. 19.—Taxes of 10 per cent on first hand sales of gasoline in Mexico to be devoted to highway construction, showed a slight increase in the period July-August compared with May-June, according to official figures of the Bureau of Special Taxes of the Department of Finance and Public Credit. The taxes on gasoline of national production decreased slightly, while those on imported gas showed an increase.

The official figures follow, values being in pesos:

July-August:	
Collected on importation	$ 331,360.78
Collected on production	773,061.99
Total	$1,104,422.77
May-June:	
Collected on importation	$ 163,687.60
Collected on production	846,737.25
Total	$1,010,484.85

SHIPMENTS FROM MEXICO

Shipments of crude oil and refined products from Mexico during September show 68 per cent of all oils was sold to the United States, according to figures just issued by the Mexican Bureau of Petroleum, Department of Finance.

The detailed figures for the September shipments as given out by the department are shown below and are expressed in cubic meters. One cubic meter is approximately equal to 6.29 barrels of 42 gallons.

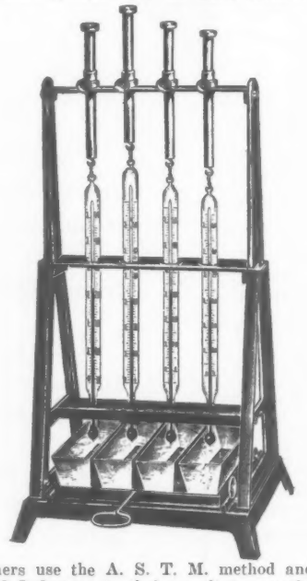
Countries	Heavy Crude	Fuel Oil	Refined Products	Per cent of Total
Germany	.....	69	2,265	0.4
Argentine	.....	.....	9,512	1.7
Australia	.....	.....	5,606	1.0
Brazil	.....	7,387	4,797	2.1
Cuba	14,853	19,153	.....	5.9
United States	268,428	74,616	48,985	68.4
Guatemala	.....	.....	41	0.0
England	11,957	37,557	.....	8.6
Bahamas (British)	24,144	15,622	24,591	11.2
Singapore	.....	.....	4,008	0.7
Totals	319,382	154,404	99,805	100.0

Short Talks on Specifications

By W. T. Ziegenhain

MELTING POINT OF WAX BY THE AMERICAN METHOD

The American melting point of wax is probably better known than the A. S. T. M. melting point just at this time, especially among marketers but the latter is gradually being adopted since the method of taking the A. S. T. M. melting point is generally considered much more accurate. The greater accuracy of the A. S. T. M. method is recognized by refiners and marketers but because it consistently gives lower results on the same wax than the American method and because the higher melting point waxes take a higher value, it has been difficult to explain to the purchasers, that he was getting the same quality of wax when it tested 124 melting point American melting point (A. M. P.) and 121 A. S. T. M. melting point (A. S. T. M.-M. P.) In many cases refiners use the A. S. T. M. method and add 3 degrees to their result to get the American melting point, and this practice is acceptable.



In the interest of standardization, the A. S. T. M. melting point should be adopted because of its greater accuracy but where the American method is specified the following procedure of taking the test is followed out.

The wax sample to be tested is heated to approximately 10 degrees Fahrenheit above its expected melting point and poured into one of the pans as shown in the picture. Four samples may be run simultaneously on this particular apparatus. The pan is filled three-fourths full and the thermometer is then lowered into the wax by releasing the thumbscrew above. The thermometer must be adjusted so the bulb is completely immersed but not touching the pan. The temperature is taken each 30 seconds as the wax cools and the pan is slowly pulled back and forth to give the effect of stirring. When three consecutive temperature readings agree, this temperature is recorded as the American melting point. The older procedures prescribed the temperature be read when three crystals appeared near the thermometer or when a thin layer of wax formed over the surface, but the results obtained were not consistent and could not be checked and are now used only in a few cases.

Marine Engine Oils Have Many Uses in Several Industries

By H. A. Shawk

Chief Lubricating Engineer, Associated Oil Co.

By the term "Marine Engine Oil," we generally mean an emulsifying product which is used to lubricate the crossheads, pins, guides, eccentric straps, links, horseshoe thrust spring bearings, top and bottom ends of rods, drip cups and combs on crossheads as found on reciprocating marine steam engines.

The term, "Marine Engine Oil," does not cover oils used in marine steam turbines, crankcase engines, dynamo bearings, steam cylinders, Kingsbury thrust bearings and so on. The term as understood by marine engineers means a hydrocarbon oil compounded with blown rape seed which produces a rich emulsion when brought in contact with water.

Straight mineral oil such as heavy red engine is sometimes used owing to its low first cost per gallon, but a good grade of compounded marine engine oil will cut lubrication costs over and above the lower priced red engine because less of it is required to obtain better results.

The object in compounding mineral oils with blown rape seed oil as stated before is to impart to it the emulsifying qualities. After the oil is in a state of emulsion, its viscosity is raised, and its adhesive and cohesive qualities enormously increased, and it is now in a condition to successfully resist the washing effect of water which is always present around a marine engine. It clings tenaciously to the bearing surfaces, and also acts as a temperature indicator. When a pin or bearing starts to heat up, the oil will present a dark brown or black appearance which will give the engineer advance warning that trouble is approaching. A smooth, creamy lather is an indication that the lubricant is performing with satisfaction. Care should be exercised in the handling and storage of compounded marine engine oils. Should even a small amount of compounded oil become mixed with turbine oil, refrigeration oil, dynamo oil and so on, serious troubles are certain to be encountered, due to its emulsifying tendencies.

Use of Oil

Marine engine oils are used in sight feed cups, wick oilers, gravity feeds, mechanical oilers and in hand oiling. In each case the oils should be kept free from water as the resulting emulsion would clog up the sight feeds and defeat capillary attraction in the wick feeds. Many engineers employ the practice of introducing water in the main journals and so on in the regular half-hour rounds of the oiler, thereby insuring a good emulsion in all reciprocating parts. Water service is provided to each of the main journals as a safeguard in case of hot journals and the lower half of journals is water jacketed and subject to leaks, and this together with the general practice of washing down the engine with water makes a compounded oil not only desirable but almost a necessity.

Rape seed oil is obtained by pressing West Indian rape seed which produces a dark brown slimy product; this after

(Continued on Page 152)

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3564

Corrosion Detected by D. O. C. Test

Internal Combustion Engines for Land or Marine Work May Be Safeguarded by Watching Oils Used on Them

By Horace J. Young, F. I. C*

Severe corrosion having occurred on the pins and journals of the crankshafts of two motor ships it fell to the author to ascertain the cause and, if possible, to find a remedy.

For obvious reasons the author cannot dwell upon the problem as it affected his clients' business. Sufficient to say that never before, in the author's experience, has applied science been so able to demonstrate to the satisfaction of the practical engineer exactly how his troubles arose. This paper, therefore, is confined to description of the work done and is presented in the belief that it will throw some new light upon corrosion by oil, and perhaps establish some improved methods of testing oils for corrosive properties.

It is vital to this paper to state that the oils, as taken from the lubrication systems of the ships, were fully examined by at least two competent and independent laboratories and were reported to be innocent of causing the corrosion. Moreover, the laboratories in question knew of the trouble which had occurred and their work was directed with that in view.

As the result, however, of many hours spent on the engines concerned, the visual inspection of the working parts of those engines and the analysis of a large number of samples collected during that examination, the author was led into a new train of thought from which arose directly and simply the solution of the mystery.

The position at that time was that corrosion had happened—corrosion of the virulent and destructive type—in spite of which tests of the oils no clue to the cause of the trouble. All other explanations being hypothetical and unacceptable to the author, he arrived at the conclusion that the analyses must be valueless and devised what he calls a direct oil-corrosion test. (For the sake of brevity, this test in future will be referred to as the D.O.C. test.)

Conditions Reproduced

The test is performed by means of an apparatus whereby warm oil is run continuously over warm steel, white metal, brass, copper, or any other metal. The temperature employed by the author was 10 degrees Centigrade below the boiling point of water, but may be any temperature demanded in any particular case. In order to reproduce the conditions of the pins and journals, slabs were cut from similar steel and one-half of their surfaces "white-metaled" with bearing metal of the same make and quality as those used on the engines. It was possible, therefore, in one and the same test to observe the effects of the oil upon the steel, the bearing metal, and at the point where the two materials met—as a matter of fact, over many experiments, there has been no definite indication of increased activity at this junction.

The first test of this nature, when applied to the oils from the two motor ships, showed immediately that they were highly corrosive to both steel and white metal. This aspect of the problem was nothing less than astounding, the new position being as follows:

1. The immense damage on these two ships had been caused by the oils.
2. The analysis of the oil had shown nothing.
3. Direct means had been found of proving whether an oil is corrosive.
4. Hence, it might well be possible to find a cure for the trouble.

The D. O. C. test justified these hopes. After considerable experiment it was discovered that the steel or other specimen should be polished to that degree produced by No. 0 emery. Although, as seen in later photographs, visual examination provides sufficient proof whether an oil is safe to use, the action may be studied more scientifically and accurately by the aid of the microscope at a magnification of 50 diameters.

Contamination Accumulative

In the case of oils from internal combustion engines of all types it would appear that the corrosive deterioration or the contamination is accumulative. For this reason the specimens from the D. O. C. test need to be examined under a microscope. This side of the work is yet in progress and little can be said beyond stating that it has been proved that many of such oils are corrosive to a greater or lesser extent to steel, white metal and so on. The gravity of this state of things, from a practical point of view, is evident. It may be true—in certain cases it certainly is true—to say that some of the effects ascribed to attrition are due directly or indirectly to corrosion by oil.

Analysis having failed to detect the properties of oils which D. O. C. tests proved to be highly corrosive, it appeared necessary to conduct a research upon an oil to which definite quantities of acid had been added. A lubricating oil (A) giving negative results under the D. O. C. test was chosen. This oil has the following analysis:

Closed flash point	297°F.
Specific gravity at 70° F.	0.8893
Redwood viscosity at 70° F.	1,047 secs.
Acid value	0.08%
Saponification number	0.20%
Inorganic acid (I.P.T.,L.O. 5)	Nil.
Ash	0.002%
Total sulphur	0.229%
Water	under 0.05%

To this was added known amounts of concentrated sulphuric acid and the inorganic acid test (I.P.T.) again applied. The results are as follows:

	Sulphuric acid added $\%SO_4$.	Inorganic I.P.T.,L.O. 5 %	Sulphate value $\%SO_4$.
Original oil A			
(1) Original oil A plus acid	0.1883	0.017	0.111
(2) Original oil A plus acid	0.0188	....	0.007
(3) Original oil A plus acid	0.0019	....	0.0005

(Note—The sulphate value is in accordance with the analytical method described in the appendix).

Sulphuric acid to the amount of 0.1883 per cent SO_4 was added to two other oils of the following analyses, both oils being noncorrosive under the D. O. C. test.

	Mineral bearing oil (B)	Compressor compound oil (C)
Acid value	0.07	0.05
Saponification number	Nil.	0.01
Inorganic acid (I.P.T.,L.O. 5)	Nil.	Nil.
Ash	0.014	Nil.
Total sulphur	0.722	0.690
Water	under 0.05	under 0.05

When analyzed, these gave:

	Sulphuric acid added $\%SO_4$.	Inorganic acid I.P.T.,L.O. 5 %	Sulphate value %
(4) Original oil B plus acid	0.1883	0.089	0.126
(5) Original oil C plus acid	0.1883	0.017	0.164

Thus the inorganic mineral acid estimation appeared to be valueless; throughout these investigations it gave negative results upon service oils, which the D. O. C. test showed to be highly corrosive and which had a high sulphate value.

The above five "acidified" oils gave the following results on the D. O. C. test:

Sample	Sulphuric acid added $\%SO_4$.	Volume of oil employed c.c.	Total volume passed over specimen Liters	Number of heatings	Total hours of heating
Oil A (1)	0.1883	250	4.2	6	32
Oil A (2)	0.0188	250	4.2	6	32
Oil A (3)	0.0019	250	4.2	6	32
Oil A (4)	0.1883	250	3.8	8	47½
Oil C (5)	0.1883	250	3.8	8	47½

Result of Test

Sample—	Steel	White metal
Oil A (1)	Very bad attack	Very bad attack, removed in places
Oil A (2)	Slight etching	Darkened
Oil A (3)	Slight etching	Untouched
Oil B (4)	Very bad attack	Very bad attack, removed in places
Oil C (5)	Very deep attack	Removed in oil path

In the case of acidified oils No. 2 and 3 the test was continued:

Sample—	Ttl. vol. passed over specimen	Total No. of heatings	Total hours of heating
Oil A (2)	16.2	19	111½
Oil A (3)	16.2	19	111½

Result of Test

Sample—	Steel	White Metal
Oil A (2)	Serious effect	Being attacked
Oil A (3)	Slight but definite etching	Darkened

This proved that 0.1883 per cent SO_4 (added as H_2SO_4) is fatal in 32 hours, whilst one-tenth of that amount, namely 0.0188 per cent., has a serious effect in 111 hours; while one-hundredth, namely, 0.0019 per cent is beginning to make a definite attack after 111 hours. It is to be remembered, when considering the results, that only 250 cm_3 of the "acidified" oil was employed in each test and that the result might be expected to have been worse had, say, 16 liters been used.

The D. O. C. test was repeated on "acidified" oils 1, 4 and 5 with the sole difference that 10 per cent by volume of water was added. After 47½ hours heating, the attack upon both steel and white metal was found to be very severe; if anything, slightly worse than when no water was present.

The original oil A, which was noncorrosive to steel or white metal by the D. O. C. test, was digested with potassium hydroxide solution and thoroughly washed. This is called sample 6. Another sample was prepared by adding 50 c.c. of sea water to 50 c.c. of the original oil A, evaporating off all aqueous matter, adding 200 c.c. of the original oil A, and heating to 80 degrees Centigrade for half an hour. This is called sample 7. Under the D. O. C. test were obtained the following results:

Sample—	Total volume passed over specimen (Liters)	Total number of heatings	Total hours of heating
Oil A (6)	16.2	19	111½
Oil A (7)	9.6	14	79½

	Grains per gallon
Total solids at 105° F.	2,657.6
Total solids at dull red heat	2,328.6
Total solids sulphates	165.2
Total solids chlorides	1,360.6

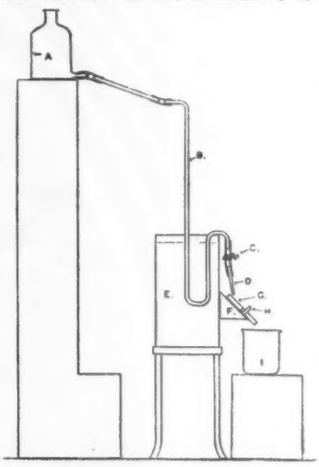
Small Water Content

At the conclusion of the test sample 6, the oil was analyzed for water and found to contain less than 0.05 per cent.

It appears that caustic treatment of an uncorrosive oil causes it to become corrosive in spite of washing the oil to remove the caustic. Also sample 6 proved that the D. O. C. test is sensitive to a small amount of sea water salts and that the effects upon the steel and white metal are of a different character to those produced by oils contaminated by sulphuric acid, sulphates or products of combustion.

Sample—	Sulphuric acid added $\%SO_4$.	Cleaning reagent used c.c.
Oil A (1)	0.1883	50 KOH
Oil A (2)	0.0188	50 KOH
Oil A (3)	0.0019	50 KOH
Oil A (8)	0.1883	50 KOH
Oil A (9)	0.1883	40 KOH
Oil A (10)	0.1883	50 KOH
Oil A (11)	0.1883	50 (double-strength)
Oil A (12)	0.1883	50 KOH + 15 NaSilicate
Oil A (13)	0.1883	50 NaOH
Oil A (14)	0.1883	Nil.
Oil A (15)	0.1883	Nil.

Sulphuric acid added $\%SO_4$.	Inorganic acid I.P.T.,L.O. 5 %	Sulphate value %
0.1883	0.089	0.126
0.1883	0.017	0.164



D. O. C. TEST APPARATUS

End elevation. This apparatus is of sufficient size to carry out five tests at the same time, using one Bunsen burner under the bath.

A. Aspirator, 250-1000 c.c. capacity. B. Glass tubing, 3/16"—1" external diameter. C. Screw clip. D. Glass jet. E. Bath, 4⅛"×8"×18" long. F. Triangular bar. G. Specimen, 2"×2"×⅛". H. Stud. I. Beaker, 250-1,000 c.c. capacity.

Result of Test	White metal
Slight action	Darkened and
Pitted (not etched) particularly where jet touches	corroded where jet touches Pitted

Better to observe the effects of cleaning "acidified" oils by means of various reagents, the following tests of cleaned oils were made on the D. O. C. apparatus, 250 c.c. of oil being used for each test, the oil being heated with the cleaning reagent for three hours. The KOH solution contained 210 grams in 300 c.c water.

No. washings	Subsequent treatment
2	None
3	None
3	Al in excess
2	None
4	None
1	None
3	None
2	None
3	None
3	Al in excess plus 12.5 cm_3 water

Alkali Treatment Unsuccessful

It became evident from the following tests that, so far as practice is concerned, alkali treatment is unsuccessful for the reason that the alkali and salts cannot be removed completely by washing. Other alkalies, such as carbonate of soda, were tried with similar results. If the efficient washing possible in a laboratory is insufficient it would appear hopeless to expect good results from such washing as can be done in practice. That we have been unable previously to demonstrate these happenings has been due, the author believes, to the failure of chemical analysis as applied to such work and the lack of a direct method as is the D. O. C. test.

Reverting to those oils which become corrosive in service, many samples have

*Read at meeting of Institution of Petroleum Technologists, October 11, 1927.

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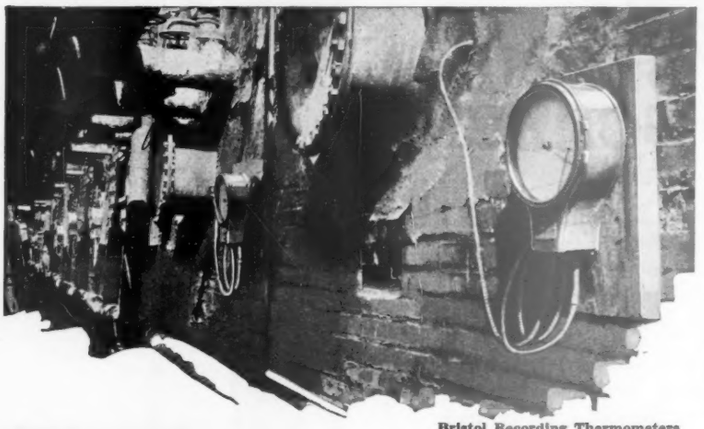

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been subjected to the D. O. C. test and have been analyzed by the sulphate value method (given in appendix) as previously applied to the "acidified" samples. The results are of extreme interest. All the following oils have been taken from the lubrication system of motor ships and are arranged in order of their sulphate values.

Sample	Total vol. passed over specimen	No. of heatings	Total hours of heating	Result of Test: Steel	Result of Test: White metal
(1)	16.2	19	111⅛	Slight corrosion	Slight corrosion
(2)	16.2	19	111⅛	Slight corrosion	Slight corrosion
(3)	16.2	19	111⅛	Very slight corrosion	Darkened
(8)	3.8	8	47⅛	Slight corrosion	Darkened and partly removed
(9)	3.8	8	47⅛	Considerable etching	Darkened and colored
(10)	8.4	15	85⅛	No action	Being removed
(11)	8.4	15	85⅛	Slight corrosion	Colored
(12)	3.8	8	47⅛	Pitted and etched	Darkened
(13)	8.4	15	85⅛	No action	Slightly darkened
(14)	8.4	15	85⅛	Slight corrosion	Starting to be removed
(15)	8.4	15	85⅛	Decided etching	

Sample	Sulphate value $\%SO_4$.	Volume of oil employed c.c.	Total volume passed over specimen	No. of heatings	Total hours of heating
(16)	0.2261	250	10.6	15	90⅛
(17)	0.1917	250	7.8	11	74¾
(18)	0.1486	250	4.6	7	44
(19)	0.1456	250	3.8	6	36
(20)	0.0884	250	10.2	12	85¾
(21)	0.0840	250	16.2	19	111⅛
(22)	0.0813	250	11	15	95⅛
(23)	0.0534	250	10	16	87⅛
(24)	0.0526	250	6.2	10	67⅛
(25)	0.0507	250	16	16	87⅛
(26)	0.0224	250	6	9	54⅛
(27)	0.0123	250	9.2	14	77⅛
(28)	0.0117	250	13.6	19	118⅛
(29)	0.0102	250	16.5	19	124

Sample	Result of Test: Steel	Result of Test: White metal
(16)	Very badly etched	Removed and the steel underneath badly etched
(17)	Very badly etched	Completely removed
(18)	Considerable etching	Removed in parts
(19)	Considerable etching	Removed in parts
(20)	Considerable etching and pitting	Nearly completely removed
(21)	Badly pitted	Removed in parts
(22)	Considerable etching and pitting	Nearly completely removed
(23)	Considerable etching and pitting	Being attacked
(24)	Pitted and beginning to etch	Pitting and deeply etched
(25)	Pitted and beginning to etch	Being attacked
(26)	Light etching and pitting	Being attacked
(27)	Considerable pitting and lightly etched	No action
(28)	No action	No action
(29)	No action	No action

Thus it will be seen that sulphate value of more than 0.05 per cent is an indication that the oil is dangerous to use.

Corrosive powers are active down to as little as 0.012 per cent sulphate value. It should be noted that all these oils were tested for inorganic acid (I.P.T., L.O. 5), the results showing either nothing at all or a trace too small to matter. A series of cleaning tests, somewhat similar to those described in the case of the "acidified" oils, were carried out on most of the above oils, many alkalies being tried together with other methods such as steam cleaning. Alkali treatment was unsuccessful by reason of the impossibility of complete washing, whilst steam cleaning was marred by the difficulty of emulsions being formed unexpectedly and sometimes considerable losses of oil occurred before separation could be effected.

Vitality Unaltered

Experiments have been made, using the D. O. C. apparatus, with a view to finding out if the corrosive properties of an oil became exhausted as the result of running it over steel. The results have proved most conclusively that the vitality of the sample remains unabated and, after many hours' running, when the corroded piece of steel has been replaced by a fresh piece, the attack continues unaltered. Evidently the products of corrosion are as corrosive as the original corrodent—possibly in the case of an internal combustion engine there is at any time little difference between them. In using the sulphate value it is essential to know also the results of a D. O. C. test, because experiments have been made by adding sulphates to uncorrosive oil and it was found that all sulphates are not equally corrosive under these conditions.

It will be remembered that in the case of the "acidified" oils some of the added sulphuric acid could not be extracted by caustic potash. Yet this "lost" acid was harmless to steel. This phenomenon gave rise to much doubt when considering the early experiments, and steps were taken to ascertain whether at any period sulphur gases were evolved from the sample such as might account for the apparent "loss" of sulphuric acid. No evolution of any gases whatsoever was detected.

In practice, however, we are interested merely in those things which cause corrosion, and somewhat fortunately the "lost" acid does not.

Very much work is needed upon this subject, and many points of interest have arisen in the course of this research.

Up to the time of writing, and speaking of many experiments, no new unused mineral or compound oil has corroded steel under the D. O. C. test; on the other hand, none of these same oils has not caused pitting or corrosion on copper and on brass.

A selection of some of the D. O. C. test results using copper or brass may be interesting:

		Acid value Per Cent	Saponification No. Per Cent
Sample D.	Used oil from system of motor ship		
Sample E.	Used oil from system of another ship		
Sample F.	Unusued oil	Nil.	0.20
Sample G.	Unusued compound oil	0.05	1.01
Sample H.	Unused oil	0.07	Nil.

These oils were tested using either copper or brass specimens.

Sample	Volume of oil employed c.c.	Volume passed over specimen (Liters)	No. of heatings	Total hours of heating	Results of Test
Sample D	250	4.8	8	43½	Brass pitted and etched
Sample D	250	4.8	8	43½	Copper pitted and etched
Sample E	250	4.8	8	43½	Brass pitted and etched
Sample E	250	4.8	8	43½	Copper pitted and etched
Sample F	250	11.2	15	99	Copper more pitted than etched
Sample G	250	8.8	7	45	Copper pitted and market
Sample H	250	8.6	7	45½	Copper very slightly marked

Summary

By the D. O. C. test as little as 0.002 per cent H_2SO_4 can be detected, and the test is equally sensitive to minute amounts of sea water, alkalies, sulphates and so on. The alkalis so readily affect white metal that an oil cleaned by alkali will attack white metal even when that oil has been washed three or four times with water.

The D.O.C. test thus affords a means of testing the efficiency of any cleaning process. In this connection it has led to the perfecting of a simple appliance which, inserted into an oil system will keep the oil "sweet."

The study of compound lubricants as used on compressors is greatly facili-

(Continued on Page 158)

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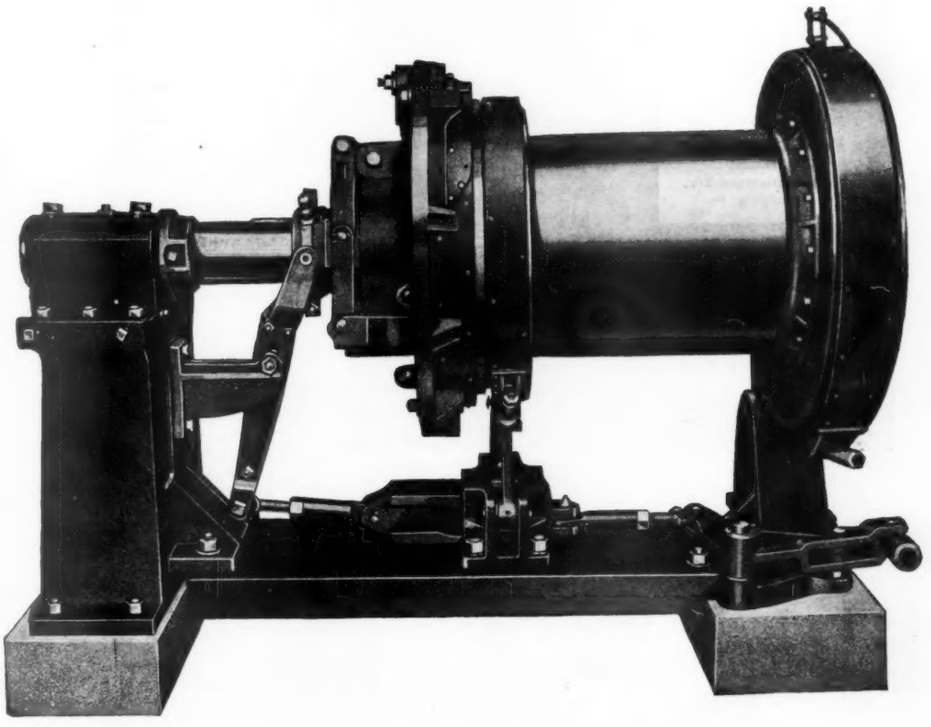

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THREE BIG FACTORS CONTRIBUTE TO EXPANSION OF VENEZUELA

By H. J. Wasson*
New York, N. Y.

Developments in Venezuela during the past few months have been obscured by the happenings in Seminole and, more recently, those in southwest Texas. The question has been asked whether or not the opening of these vast new prolific areas in the United States may not have depressed prices to a point so low as to give the developments in the Caribbean countries a serious setback. Nothing of the kind, however, has taken place, and on the contrary, there has been demonstrated the fact that Venezuela can profitably produce great quantities of oil under existing market conditions, and at the same time finance the foundation for further large expansion in the future.

Three Big Factors

The three big factors which contribute to place Venezuela in a unique position and tend to insure the steady expansion of its oil industry are, in the order of their importance:

1. Reasonable oil laws backed by a sound government, which comprehends the all-important fact that the country's prosperity depends on the prosperity of its industries, in a word, perceiving that the goose which lays the golden egg merits considerable treatment.
2. The low cost of placing Venezuela oil on our Atlantic Seaboard; not over 60 cents per barrel.
3. The uniformly high average production per well and the large area of some of the individual pools.

Under these conditions Venezuelan producers may be expected to continue steady and profitable expansion even in the face of further market slumps. Their position is analogous to that of the low-cost copper producers, and unless artificial barriers, such as tariffs, come into play, Venezuela will steadily grow in importance. Within less than five years it should be second only to the United States among the oil-producing countries of the world.

During the first half of the year Venezuela produced in round numbers 27,000,000 bbls. of petroleum, of which 21,000,000 bbls. was exported. This was at the rate of 150,000 and 113,000 bbls. per day respectively. The difference between the amount produced and the amount exported is the oil consumed in the country and run into storage. The second half of the year will see a substantial increase in exports, as during this time the Lake tanker fleets now in operation will have been increased by a number of new vessels. These new ships will, it is estimated, increase export capacity by about 40,000 bbls. per day; so with the close of the year the industry should be marketing outside of Venezuela some 170,000 bbls. of oil per day. The present export rate is about 130,000 bbls. per day. Most of this oil ultimately finds its way to the United States, either as crude direct from the ocean terminals of the Lago Petroleum Corp. or Gulf Oil Co., or as refined products from the Curacao refinery of the Royal Dutch Co.

Control of Production

The entire Venezuela production, except about 1,500 bbls. per day obtained in Eastern Venezuela by the General Asphalt Co., is controlled by Royal Dutch, Lago Petroleum and Gulf Oil Co. At present Royal Dutch controls about 70,000 bbls., and the remaining 60,000 is about equally divided between Lago and Gulf. Other interests, including Standard Oil of New Jersey and Standard Oil of California, are carrying on drilling operations, but so far the four companies mentioned control all the production.

The size and importance of the fields now under exploitation have been further established in an impressive manner by developments during the first half of the year. The La Rosa Field, including the Ambrosia and Punta Benitez pools, now covers an area of proved territory easily 12,000 acres in extent, and with outlying wells being completed every few weeks, this producing area is being continually extended. Only a small part of this La Rosa proved territory has been closely drilled, but in those spots which have been completely drilled the average yield per acre has been high, and the indicated ultimate extraction per acre runs into figures which, if applied to the total proved area, would indicate a reserve of several hundred million barrels. In one area of about 156 acres, which because of offset requirements was drilled rapidly, the production to date has been over 7,000,000 bbls., and indications are that pumping will get at least another 1,000,000 bbls. This tract should yield, all told, well over 50,000 bbls. per acre, yet from a geological standpoint it is no more favorably located than much of the remainder of the La Rosa Field.

West Dipping Monocline

So far the La Rosa production has all come from a west-dipping monocline. If the sands going up the dip turn over the axis of an anticline and dip eastward, the fact has as yet not been established by drilling. An east dipping flank to the Losa structure, if it exists at all, is inland from the Lake, and would be controlled entirely by the Venezuela Oil Concessions, Ltd., but the wells of this company have not reached far enough eastward to determine this point.

The outstanding geological fact at La Rosa is the extraordinary distance down the dip to which the oil extends. On most structures a few hundred feet down the dip from the axis of an anticline finds the sands saturated with water instead of oil. At La Rosa, however, production has been found in the same sand zone fully 1,500 feet deeper in extreme western wells than it is found in the extreme eastern wells. Moreover, these down dip wells show no falling off in initial production and the eventual depth at which the western edge water will be reached is still unknown.

The La Rosa Field is at present producing only a fraction of the oil which it is capable of yielding. This is a result of intercompany agreements, which have permitted substantial curtailment of drilling activity. In the La Rosa, Ambrosia and Punta Benitez fields, which comprise the La Rosa area, there are now only 17 wells drilling. Of these, Lago has 6, Gulf 7 and Venezuela Oil Concessions, Ltd. 4. The production of the La Rosa area is about 55,000 bbls. a day, and is being easily maintained by these 17 drilling operations. As a matter of fact, a large amount of production is shut in, and there is little doubt but that the present rate of La Rosa production could be continued indefinitely with even less new drilling. As a comparison with this situation, there are now in the Seminole Field roughly 100 drilling operations for every 100,000 bbls. of daily output, and there is hardly any immediate prospect that this ratio of production to drilling expenditure will be greatly changed. From such a contrast the economies possible under cooperative control of drilling, together with prolific oil sands, become self-evident.

Lagunillas Field

The Lagunillas Field, lying along the lake about 25 miles south of La Rosa, is at present the center of interest in Venezuela. Developments in this field are going forward at a more rapid rate than at La Rosa, although here also agreements between the three operating companies are holding drilling in check, and there is no semblance of the line-fight drilling so commonly witnessed in American fields. At the present time the Lagunillas Field is producing about 70,000 bbls. oil per day from 19 wells. There are 15 wells drilling, it being understood that operations are held down to 5 rigs for each company. The Lagunillas wells have been uniformly larger producers than either the wells at La Rosa or Mene Grande, and this naturally accounts for the drawing of a larger quantity of oil

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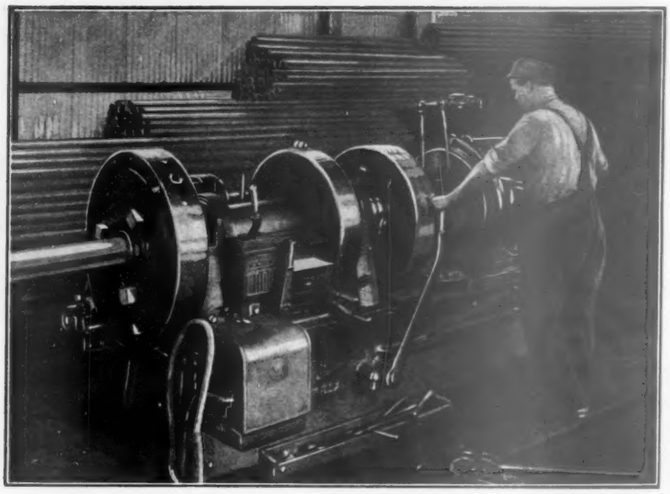

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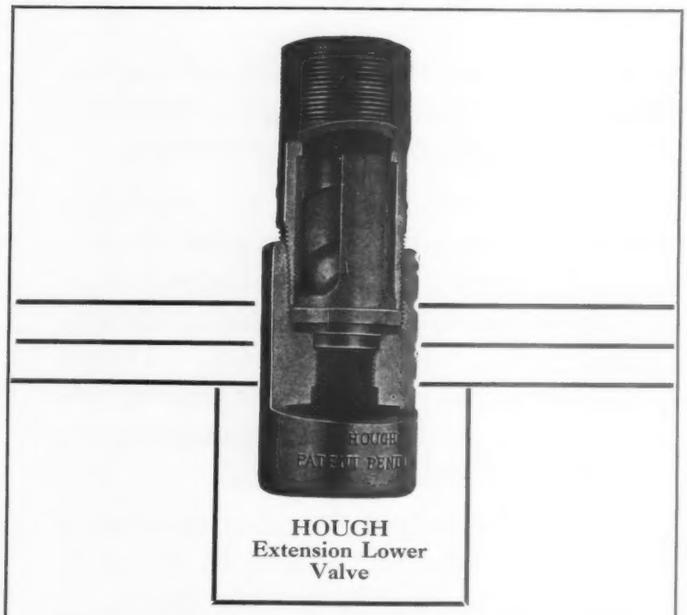

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from this field. All things considered, it must be the lowest cost field in Venezuela.

As at La Rosa, the initial developments are strung out along the north-south shore line, marking the boundary between V. O. C. on the land side and Lago and Gulf in the waters of the lake. At present the proved territory is only a thin belt a few hundred yards wide, but in the long dimension it has already attained the impressive length of 4½ miles, and at neither extremity has a dry hole been encountered. Toward the southern end of the field the depth to production has increased to 4,000 feet, or about 400 feet down the dip. However, the most southerly well, Lagunillas 17, of the Lago Petroleum Corp., recently completed, registered an initial production of 4,000 bbls. daily of clean oil, thus indicating that there will be further substantial extensions in this direction. Toward the north end of the field production is running higher structurally as the field is extended, and with all indications pointing to almost an indefinite prolongation of the field in this direction. The occurrence of the oil along a general west dipping monocline corresponds closely to the condition at La Rosa. Accordingly there is every reason to believe that the field will extend over an equally great area.

However remote it may be, there is a real possibility that production will eventually be developed along a continuout belt, including both La Rosa and Lagunillas fields and the as yet untested area lying between. Such an eventuality will duplicate the so-called belt of monoclinal production along the west side of the San Joaquin Valley in California, where the zone of more or less continuous producing territory is about 35 miles in length.

Mene Grande

In the Mene Grande Field, entirely controlled by the Royal Dutch, production has been maintained at between 15,000 and 20,000 bbls. per day. For the past few months the drilling program in this field has been held down to eight strings of tools. The field is undoubtedly capable of producing much more oil than it is doing from the wells already drilled, and there is a large area of semiproved territory in reserve. The most important recent well in Mene Grande was No. 90, with a total depth of 3,600 feet. This, the southernmost well of the field, came in with an initial production of 14,000 bbls. a day and with the extraordinarily high pressure of 900 pounds per square inch. It added materially to the reserve of proved territory in the field.

At El Mene production has been held at an average of close to 7,000 bbls. per day. Slight extensions were made to the proved territory, but it now seems certain that the limits of the pool are defined. That other similar pools, however, will be found along the same belt running east-west across the State of Falcon seems reasonably sure; and as an indication of this, the recent developments of the Standard Oil of New Jersey at Hombre Pintado are of interest. The Hombre Pintado well is about 10 miles east of El Mene Field and is along the strike of the formations encountered in the latter field. In this well the Standard has apparently obtained a 200 to 300-bbl. producer at a depth of 1,600 feet. This is about the average size of initial production at El Mene; so the opening of a similar pool at Hombre Pintado is not unlikely. A field at this point will lend much interest to the intervening 10 miles between it and El Mene, and no doubt the British Controlled, which owns most of this territory, will thoroughly investigate its possibilities.

Possible New Pool

Farther eastward in Falcon, and well out of the Maracaibo basin, Standard Oil of California, jointly with the Beacon Sun Co., seems likely to open up a pool north of Urumaco. The first well drilled here gave a showing estimated at 500 bbls. of oil and much gas. This first hole was lost, but the second one now drilling is thought to stand an excellent chance of finding commercial production. Still farther to the eastward, in the eastern extremity of the state, the North Venezuelan Petroleum Co. is meeting with substantial encouragment at El Mene del Salto, and it is quite probable that a commercial pool is in the making at this point.

On the west side of Lake Maracaibo the fields of La Paz and Concepcion have developed into areas of small producers, similar in type to the British Controlled El Mene Field. Work at both of these fields is at present shut down. Before the shut down the combined output of the two fields was around 4,000 bbls. per day.

In the district of Colon, the Royal Dutch has accelerated its activities in the Tarra Field, and begun the testing of the Manueles Dome, lying to the north. Colon development is running six strings of tools in the district; four at La Tarra, one at Rio de Oro, and one at Manueles. Altogether about 30 wells have been completed, or shortly will be, in this general area. Most of these have encountered oil in commercial quantities, so a considerable reserve is definitely proved. Whether this reserve, in the face of present market conditions, is large enough to justify at the moment the cost of the necessary pipe line and other facilities, which must precede its exploitation, is, of course, a question that only the interested company can determine. Taking a long-range viewpoint, however, it is certain that the oil reserves in Colon, as indicated by the wells already drilled, are of substantial size, and will ultimately constitute an important proportion of the Venezuelan output.

In eastern Venezuela there has been little change in the general situation for several months. The General Asphalt Co. is producing about 2,000 bbls, per day of very heavy oil from the vicinity of Guanoco Lake. The Standard of New Jersey is running about seven strings of tools on wildcat locations. So far no new fields of importance have been discovered, and none appear to be in immediate prospect.

In central and southwestern Venezuela considerable geological reconnoitering is in progress and it is reported that important seepages and other favorable indications of oil have been encountered. These seem to justify the belief that at some future time this large area, south of the Venezuelan Andes, will contribute an important amount of oil to the world market.

MARINE ENGINE OILS HAVE MANY USES

(Continued from Page 144)

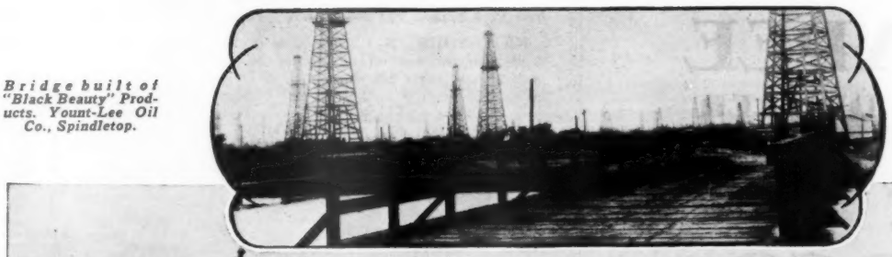
refining and treating becomes a light viscosity, pale colored oil. It is then heated to about 200 degrees Fahrenheit and blown for several hours with air during which process the oil undergoes a change. The air rapidly oxidizes the product, causing it to darken in color and increase in viscosity. The rape seed oil is then ready for compounding with hydrocarbon oils in varying proportions as may be required.

The best grades of marine engine oils contain about 10 per cent of blown rape seed oil, which conforms to United States Navy specifications.

The use of marine engine oil is not, as its name suggests, restricted to lubrication on board ship. Many uses have been developed for this product in industrial lubrication and it is many ways one of the most important of industrial lubricants for general use.

SAGINAW REFINING PROGRESS

SAGINAW, Mich., Nov. 19.—The refining plant of the Standard Oil Co. of Indiana, located just north of this city, is rapidly nearing completion. Trial runs may be started before the close of the month. The company has been buying oil from the Saginaw Field for some time, storing it at the plant in preparation for the commencement of operations. The superintendent of the plant is William A. Hutchison, a well-known refiner.



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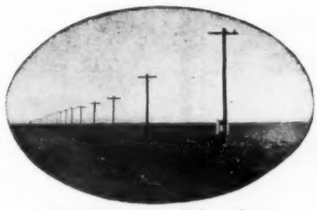

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INGLESIDE SHIPMENTS FEATURE ATLANTIC COAST PORT RECEIPTS

By N. O. Fanning

New York Bureau, The Oil and Gas Journal, Room 629, No. 101 Park Avenue, New York, N. Y.

NEW YORK, Nov. 21.—Receipts of crude and refined oil by tanker at Atlantic Coast ports for the month of October are estimated at 16,828,000 bbls., a daily average of 541,000 bbls., compared with 18,082,000 bbls. or 601,000 daily, for September, and 13,938,000 bbls. or 445,000 bbls. a day, for October, 1926.

Receipts for October, 1927, were featured by the first tanker shipment of West Texas crude by way of Ingleside (or Corpus Christi), these being estimated at 439,000 bbls. for the month.

No very great changes occurred in arrivals from the other ports of the United States or South America with the exception of Mexico, where a further decline occurred. Imports to the Atlantic Seaboard in October from that country were 1,195,000 bbls., a daily average of 38,000 bbls., compared with 2,071,000 bbls., or 69,000 bbls. a day, during September, and 1,894,000 bbls., or 61,000 bbls. a day, during October, 1926.

South America (including Trinidad) made a somewhat smaller contribution in October than in September, but much larger than a year ago.

The following table shows estimated total and daily average receipts of crude and refined oil by tanker at Atlantic Coast ports for October and September, 1927, and October, 1926 (figures in barrels):

	Oct., 1927	Sept., 1927	Oct., 1927
Baton Rouge & New Orleans	1,056,000	1,281,000	2,255,000
Port Arthur, Sabine & Beaumont	4,433,000	5,349,000	3,414,000
Texas City, Houston & Galveston	3,810,000	3,468,000	2,767,000
Corpus Christi	439,000	.....	.....
Gulf Coast	9,738,000	10,098,000	8,436,000
Pacific Coast	3,040,000	2,927,000	2,252,000
Mexico	1,195,000	2,071,000	1,894,000
S. America	2,855,000	2,986,000	1,356,000
Total	16,828,000	18,082,000	13,938,000
Daily Averages by Months			
Baton Rouge & New Orleans	34,000	42,000	72,000
Port Arthur, Sabine & Beaumont	143,000	178,000	108,000
Texas City	123,000	116,000	90,000
Corpus Christi	14,000	.....	.....
Gulf Coast	314,000	336,000	270,000
Pacific Coast	98,000	97,000	71,000
Mexico	38,000	69,000	61,000
S. America	91,000	99,000	43,000
Total	541,000	601,000	445,000

Receipts from Corpus Christi were by two companies, indicating that there will be a broad market for West Texas crude on the Atlantic Coast when transportation facilities to the Gulf are enlarged in line with growing production of the West Texas fields.

MUD SAMPLES FROM BOTTOM OF SEA BEING ANALYZED IN OIL RESEARCH

Science considers the oceans and their floors to be potential sources of information respecting future oil supply, and is studying them in detail to that end. Additional knowledge of the origin of oil and better understanding of the best ways to locate it are being sought.

Off the coasts of both the great western continents research is going steadily forward. Sediments are being probed, very much as a surgeon examines a wound. Dr. Parker D. Trask, research associate of the American Petroleum Institute, is studying the floors of the Atlantic and the Pacific, of the Gulfs of Mexico and California and of Hudson Bay. This task is being performed under a committee composed of Dr. W. Van der Gracht, Dr. T. Wayland Vaughn, director of the Scripps Institute of Oceanography at La Jolla, Calif., and Dr. Austin H. Clark of the Smithsonian Institute. The project is endowed by John D. Rockefeller.

"Our purpose," explained Dr. Trask to the New York Times, who just now is analyzing by distillation mud samples taken from the Pacific off the Southern California coast, "is to study the conditions under which the sediments that in the future will be the possible source beds of petroleum are forming today. The work relates to the solution of the question of the origin of petroleum and should afford essential information that will aid the geologist in his increasingly difficult task of finding new oil pools.

"Since most of the source beds of present-day oil fields are marine in origin, it is seen that this project is closely associated with oceanography and hence is a very practical application of that science. Although attention is concentrated on the material at the bottom of the sea, the problem is directly associated, too, with all that goes on in the water above.

"In attacking the problem it is necessary, first, to discover what sediments are possible future source beds, and then, after having found them by means of a reconnoissance of certain critical areas of depositing of sediments, the most likely region will be chosen for detailed examinations. In the course of such a survey, information as to the general distribution of organic matter in sediments and information as to how the organic matter varies in different types of sediments will be obtained.

Testing the Sediment

"The most important thing in conducting the work has been to find some suitable means of determining, fairly rapidly, the organic content of sediments. Distillation of dried sediment in the same manner that oil shales are tested was found to be the most practical method, because in addition to giving a good index of the organic content this method allows comparisons to be made with distillations of oil shale. Thus light is thrown on changes in sediments from the time of formation until the ultimate rock product is reached."

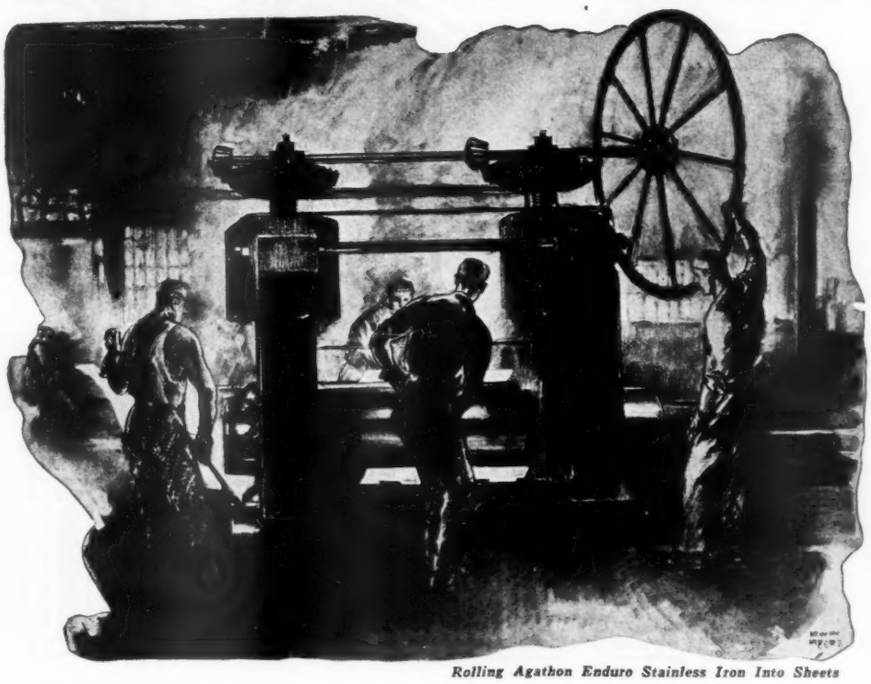
Two areas, the channel islands west of Los Angeles, and Pamlico Sound, the large body of shallow, brackish water lying inside Cape Hatteras, have yielded results.

"The most important preliminary result of work on this problem, which is based on the distillation of some forty-five samples," according to Doctor Trask, "is that all types of sediments, from clay to sand, upon distillation yielded oil."

The yield he found to be low, and generally it varied in amount with the degree of the sediments. The yield ranged from a maximum of 2.7 gallons a ton of clay-silt to almost nothing in a sand. This maximum yield is but 5 or 10 per cent the amount obtained from the better grades of oil shale, which runs from 30 to 50 or more gallons. Mr. Trask says that possibly the areas so far investigated are not particularly favorable, and that he may find more highly organic deposits along the Florida coast.

His procedure in collecting mud from the bottom of the ocean is simple. On a recent journey he set out in a small boat belonging to the Scripps Institute at La Jolla, ready for a day's chugging about the Pacific. His apparatus consisted in the main of two samplers, several lengths of strong steel pipe, a number of tin cans to contain the sediment brought to the surface, a length of cable and a seagoing disposition.

One sampler he uses in shallow water, up to about 20 feet; the other is dropped at the end of a small cable, up to a depth of 2,000 feet. The scientist maintains direct control over the sampler used in shallow, in-shore water. He fits a number of short-length steel pipe on



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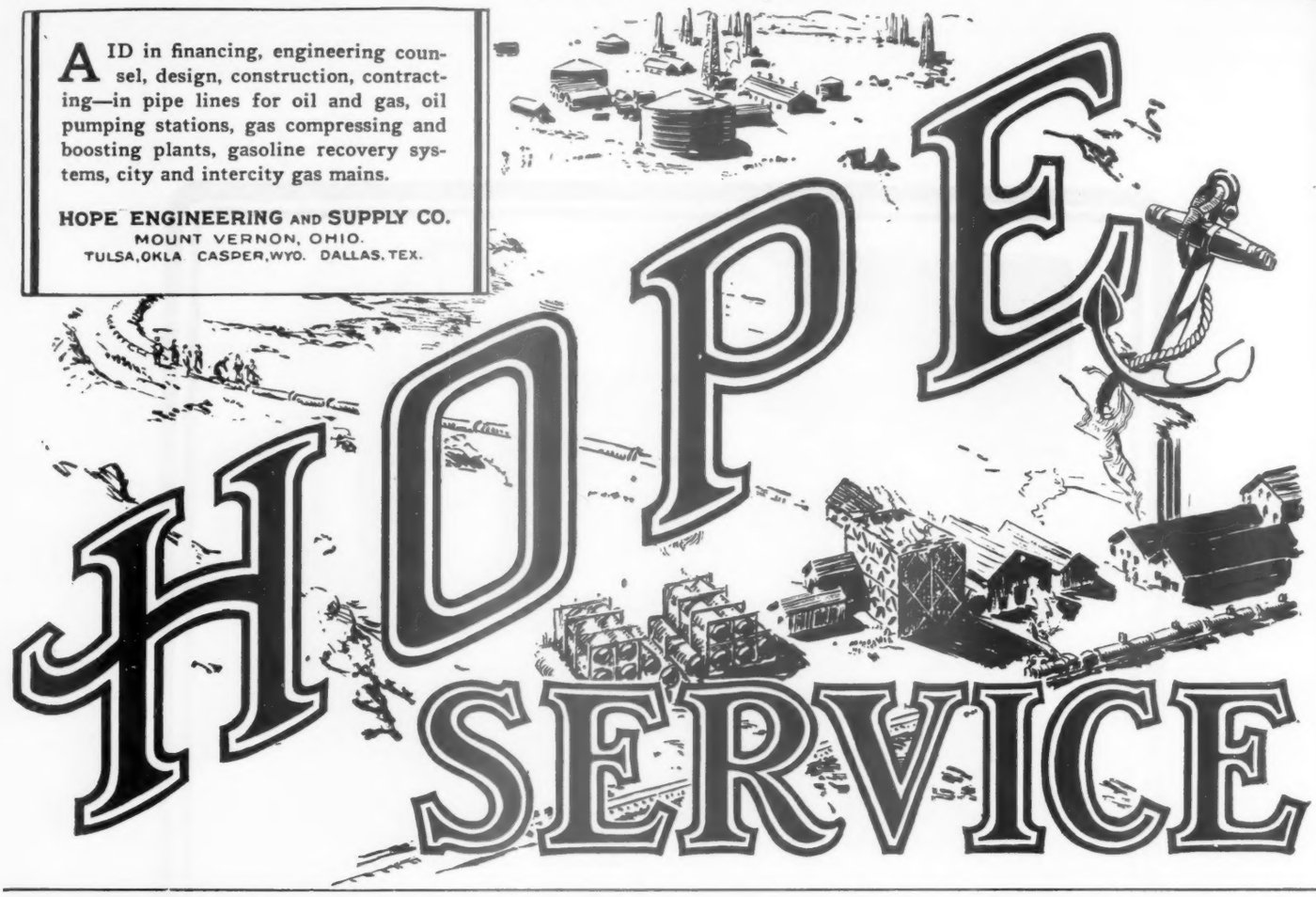

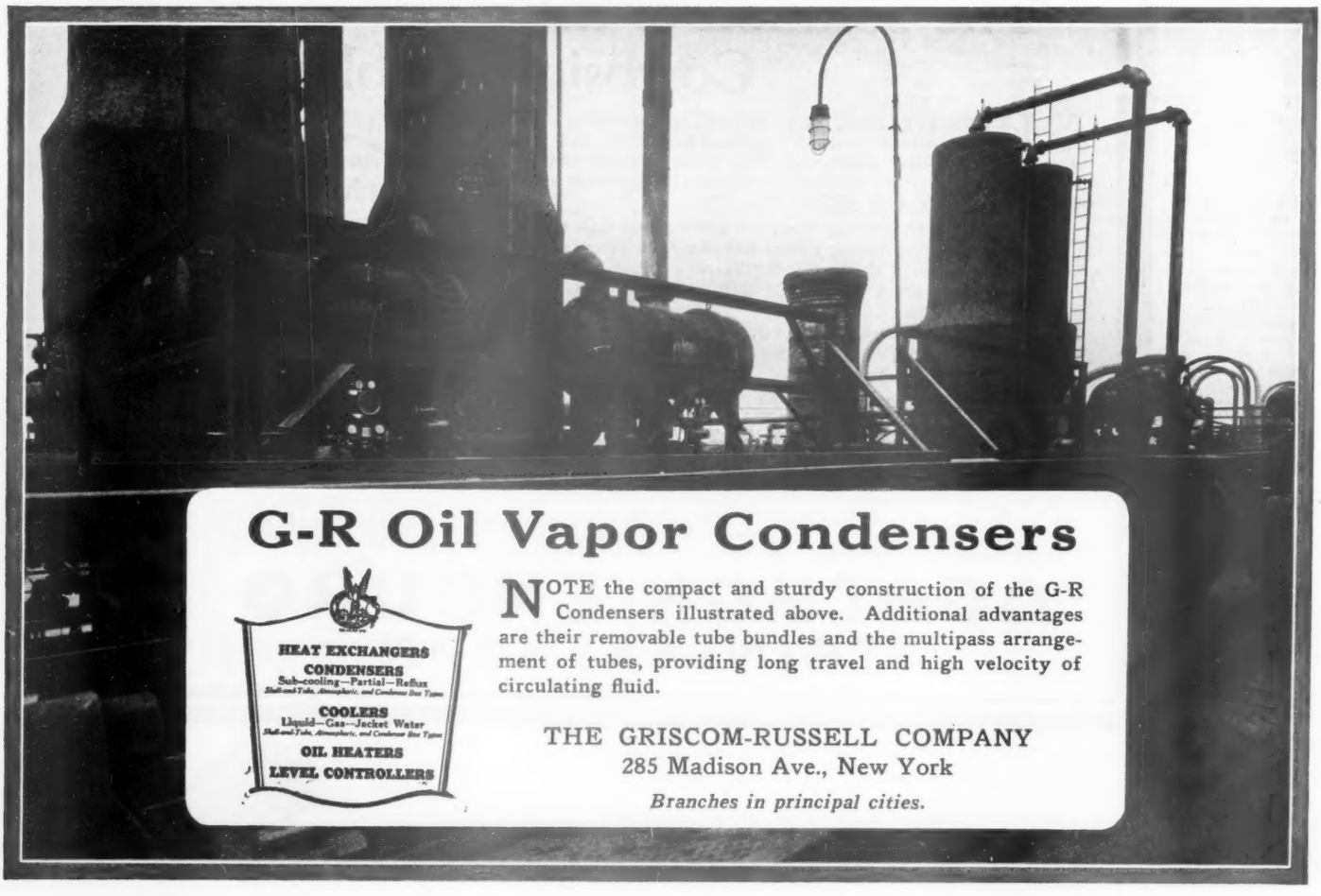

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this piece, depending upon the depth of the water. Say that the water is 20 feet deep and he wishes to plunge the sampler 10 feet into the mud. He fastens 28 feet of pipe on the sampler, balances the length in his hands, then quickly noses the point downward and permits it to slip into the ooze.

The sampler consists of a brass cylinder in which a brass plunger has been fitted. When the apparatus has been plunged to a point 2 feet above its maximum intended depth, the operator pulls the plunger upward until a spring catch engages at the top. Because of the friction outside the cylinder does not move. Once the catch snaps, the scientist forces the whole near'y 2 feet further and the cylinder fills. Friction holds the contents in as the sampler is hauled to the surface. The material brought up is emptied into a container.

Doctor Trask says that he has succeeded in handling a 40-foot length and in extracting mud sections 20 feet below the surface of the ooze and 40 feet below sea level.

How the Device Operates

Where the ocean is deeper he attaches his sampler to a long cable. At the top of this sampler is an enlarged valve which permits uprushing water and sediment to pass through the chamber freely during its descent. A heavy weight fixed to the cylinder causes it to drop perpendicularly. Its own weight and that of the supplemental metal are the only force used to carry it down. Therefore the depth limitation of this is governed by the weight, distance of drop and ooze consistency. Generally speaking, it will not take a sample more than 4 feet deep in mud.

Oil does not exist in its native state in ocean sediment, in so far as Doctor Trask has been able to determine. Rather, it forms as the probable result of some chemical rearrangement similar to the production of oil from oil shale.

Doctor Trask's effort is to find some way of helping the geologist find areas that may be drilled for oil without the possibility of failure. More and more, he says, the geologist needs information in his search for new oil fields.

LOSS OF $768,000,000 FROM OVERPRODUCTION

The reward of overproduction in any line is lowered prices. Agriculture has paid a huge penalty for growing too much cotton, wheat and corn. Manufacturers of talking machines, of underwear, of army supplies of all kinds have seen their stuff thrown upon a glutted market at less than factory cost.

So with the oil industry, says the Lamp. Unable to keep production of crude in balance with consumption of products, it has paid a big price for its own success in overproducing for the country's needs.

The excess production of this year is about 7 per cent of the total. Coming on top of a previously accumulated surplus of record size, the seven unneeded barrels of every 100 bbls. produced proved the straw that breaks the camel's back. It is the relatiely small floating surplus that fixed the price for the whole 100 bbls.

This price has not been remunerative to the producer. By encouraging overproduction of refined products it forced down retail prices until they likewise returned an inadequate amount on the capital invested in refining and marketing facilities.

The public was quick to appraise this situation by revaluing petroleum securities. From early in 1926 to the middle of October, 1927, there occurred a depreciation of more than $1,000,000,000 in the market values of the listed stocks of oil companies.

This enormous depreciation is the direct result of overproduction. The comparatively small surplus of 7 bbls. in each 100 bbls. produced actually cost the investors in the industry $14 a barrel over the price received for the oil. It was expensive oil.

It may be argued that this is a paper loss, due as much to sentiment as to the actual change in the status of the industry. If and as the business recovers and earnings gain, security prices may advance correspondingly and extinguish this depreciation.

There is, however, another way of appraising the cost of overproduction in a more tangible form. That is the difference between the sum received by the producers and what they would have been paid had the surplus production not broken the crude market.

On the last day of October, 1926, when overproduction had not yet forced the first of successive reductions in posted prices, Mid-Continent crude of 38 degrees gravity brought $2.45 per barrel. Prices of other grades ranged according to quality and accessibility from 75 cents for San Joaquin Valley heavy to $3.25 for Pennsylvania. Eleven months later, October 1, 1927, Mid-Continent was $1.32, and other grades were down proportionately. Since there was little if any reduction in producing costs, the difference represents actual losses taken by the producers. The total value of the crude produced in the United States on October 1, 1927, was $3,068,190. Had the same prices been in force as obtained on October 31, 1926, this same production would have returned $5,173,239. The loss on one day's production is therefore $2,105,049, or at the appalling rate of $768,000,000 per annum.

When it is considered that the investors' appraisal takes into account not only the loss in production but the very serious shrinkage in manufacturing and marketing income as well, it anpears that the depreciation of more than $1,000,000,000 in the value of listed stocks has not been out of line with the actual loss incurred by the different departments of the industry.

NEW CENTRAL TEXAS MAP

An excellent example of topographic surveying and map engraving and printing by the Geological Survey is seen in the map of the Pickwick quadrangle, in North Central Texas, just issued. This map is published on one of the standard scales adopted for the topographic maps of the United States with approximately 1 inch on the map resenting 1 mile on the ground, and a 20-foot interval of elevation between contours—a scale which enables the topographic engineer to portray the physical character of the country is good detail. This quadrangle covers about 250 square miles of territory. The map is printed in three colors—blue for rivers, creeks and ponds; black for political boundary lines, names, roads, houses and all other works of man, and brown for contour lines. The contour lines, because they represent hills, hollows and plains, bring out many vital features that are not shown on an ordinary map, so that it is apparent to the geologist that the Pickwick area is composed of northwestward dipping rocks of different degrees of hardness. The soft beds have been eroded down to an altitude ranging from 900 to 1,000 feet above sea level, but the harder beds stand up as distinct ridges crossing the area in a northeasterly direction. The rocks do not dip steeply and consequently the ridges are unsymmetrical with steep slopes toward the southeast and gentle slopes in the opposite direction. Three such ridges are seen to cross the area. Despite these ridges, the Brazos River crosses the area in great sweeping loops which probably exceed in size and number those of any other river in the United States. Thus the air-line distance from Costello Bend to Gaines Bend is only a step, a bare half mile, yet the distance by the river is 17½ miles. As such meanders could have been developed only on a very flat surface, the present course of the Brazos must have been determined long ago, when the surface was at least 500 feet higher than it is today and when that surface was as flat as a floor.

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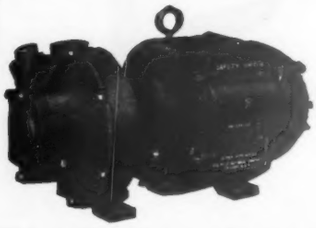

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PYLE-NATIONAL turbo-generators consume less steam than any other units now on the market, but economy does not stop here. Type "M-2-S" will carry a light load without wasting steam. The governor automatically cuts down the steam consumption to just what is needed to carry the load, admitting only what is absolutely necessary.

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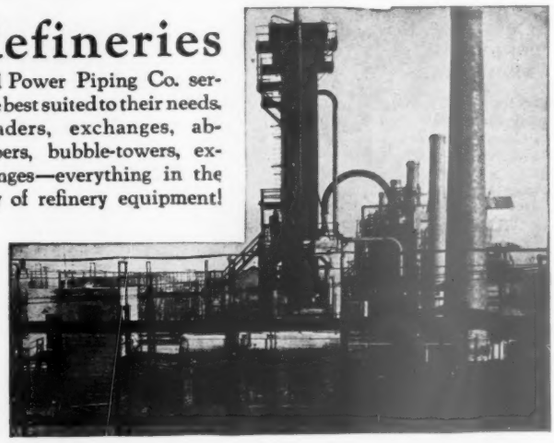

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CORROSION DETECTED BY D. O. C. TEST

(Continued from Page 148)

tated and, at the time of writing, valuable information is being obtained as to the effects of high acid value (oleic), high saponification and so on.

In practice the D.O.C. test is being used as a means of watching the oils on internal combustion engines for land or marine work, and within a few hours of receiving the sample it is possible to tell the owners whether their oil is becoming dangerous to use. In transport work—automobiles, lorries, motor buses—great interest has been shown in this matter, many oils being found to be corrosive. In another direction, an expert marine engineer has expressed the opinion that the D.O.C. test may throw light upon the pitting of the teeth of turbine gearing which sometimes takes place in a manner never satisfactorily explained.

Corrosion in pipe lines is not unknown, and the work of discovering its progress, cure or prevention may be facilitated by this test.

The author feels that no apology is needed for thus advocating a test which during the past 12 months has proved invaluable to him in practice and in which practical men connected with many different branches of engineering are expressing the highest interest.

APPENDIX

Sulphate Value Test

1. 100 c.c. sample in 600 c.c. beaker. Add 20 c.c. KOH solution (210 grams in 300 c.c. H_2O). Keep at just below 100 degrees Centigrade for three hours with air bubbling through meanwhile.

Add 90 c.c. hot water. Transfer to 500 c.c. separating funnel and shake vigorously. When separated, tap off 70 c.c. of the alkaline solution into a 200 c.c. beaker, acidify with 20 c.c. strong HCl, filter and treat with BaCl in the usual manner. ($BaSO_4 \times 0.411 = SO_4$.)

2. An exhaustive examination of used oils from motor ships has been conducted on several occasions and the following example is given as containing details of considerable value. In the first place, there is the original unused oil, then the black used oil from the system and, finally, the residue from the latter and the oil freed from this residue.

	New unused oil	Black used oil	Same freed from residue
Sp. gr. at 70° F.	0.8893	0.9157	0.8913
Sp. gr. at 150° F.	0.8607	0.8881	0.8633
Viscosity at 70° F.	1,046. secs.	2,567. secs.	910. secs.
Viscosity at 90° F.	517. secs.	1,261. secs.	498. secs.
Viscosity at 110° F.	276. secs.	673. secs.	272. secs.
Viscosity at 130° F.	166. secs.	383. secs.	174. secs.
Viscosity at 150° F.	110. secs.	250. secs.	123. secs.
Acid value	0.08%	0.13%	0.28%
Saponification number	0.20%	0.42%	0.26%
Inorganic acid (I.P.T., L.O. 5)	Nil.	Nil.	Nil.
Sulphuric value	.....	0.0840%	0.0129%
Ash	0.002%	0.353%	0.029%
Copper in ash	Nil.	Trace	.....
Total sulphur	0.229%	0.225%	.....
Water	under 0.05%	18.4%	.....
Residue insoluble in benzene	.....	1.52%	.....

Analysis of Residue

	Pct.
Moisture (H_2O)	5.44
Silica (SiO_2)	Nil.
Iron oxide (Fe_2O_3)	11.30
Aluminum oxide (Al_2O_3)	0.90
Copper oxide (CuO)	0.30
Carbon (C)	52.85
Lime (CaO)	0.47
Magnesia (MgO)	1.28
Soda (Na_2O)	4.52
Sulphate (SO_3)	6.31
Chloride (Cl)	8.13

A water extract of this residue gave the following analysis:

	Pct.
Magnesia (MgO)	1.28
Soda (Na_2O)	4.52
Sulphate (SO_3)	2.49
Chloride (Cl)	8.13
Alumina (Al_2O_3)	0.50
Acidity	0.77

Its probable combination is of the following order:

	Pct.
Moisture (H_2O)	5.44
Iron oxide (Fe_2O_3)	11.30
Alumina (Al_2O_3)	0.40
Aluminium (Al_2SO_4)	1.70
Copper sulphate ($CuSO_4$)	0.42
Carbon (C)	52.85
Calcium sulphate ($CaSO_4$)	1.14
Magnesium sulphate ($MgSO_4$)	3.60
Magnesium chloride ($MgCl_2 6H_2O$)	3.48
Sodium chloride ($NaCl.2H_2O$)	13.78
Insoluble sulphate (?)	3.15
Extra chloride (?)	1.74
	99.00

RATES OF TAXATION ON MEXICAN PETROLEUM

Two taxes are collected on Mexican petroleum and its derivatives, a variable production tax based on prices and a fixed export tax. The rate is fixed by the Section of Petroleum of the Bureau of Special Taxes of the Department of Finance.

According to the Trens Agency of Mexico City, in determining the price for any given month, the average prices for the previous month are taken. The quotations from oil trade publication in United States are taken as a criterion. The report of the Mexican Financial Agency in New York is used as a check reference.

Prices are then fixed on bunker fuel oil, light crude (Sp. gr. 0.29, 0.93, 20.40 Baume) refined gasoline and refined kerosene. The production tax is based on a percentage of the price on the various products.

Fuel oil and light crude pay 11.6 per cent heavy crude (Sp. gr. 0.96, 15.7 Baume or heavier), 7 per cent; crude gasoline 4 per cent; refined gasoline 2 per cent; crude kerosene 6 per cent and refined kerosene 3 per cent.

The production tax is in accord with the decree of May 17, 1922. The export tax is based on the decree of August 8, 1922, and is as follows:

Heavy crude—5 cents United States currency a barrel; light crude, 8 cents a barrel; fuel oil, 6½ cents a barrel; gas oil, 15 cents a barrel; refined gasoline, 15 cents a barrel; crude gasoline, 30 cents a barrel; refined kerosene, 5 cents a barrel; crude kerosene, 9½ cents a barrel and lubricants, 9 cents a barrel.

Paraffin pays an export tax of 44 cents a metric ton and asphalt 5½ cents a metric ton.

The values and production taxes of Mexican petroleum during the month of November, fixed by the Section of Petroleum of the Bureau of Special Taxes, Department of Finance, are as follows:

Values

		Pesos per Cubic Meter
Fuel oil	20.20=$1.605	per bbl.
Gasoline	60.71=$0.1149	per gal.
Kerosene	38.78=$0.0734	per gal.

Production Taxes

	Tax per Cu. mtr.	Tax in U. S. Cur.
Crude—		Per bbl.
(Sp. gr. 0.93=Be. 20.38)	2.564	$0.2006
(Sp. gr. 0.96=Be. 15.68) or heavier	1.414	0.1124
Fuel oil (Sp. gr. 0.95=Be 17.21)	2.343	0.1861
Gasoline		Per gal.
Crude	2.428	0.00457
Refined	1.214	0.00229
Kerosene—		
Crude	2.327	0.00440
Refined	1.163	0.00220
Lubricants	2.500	0.00473
	Per ton	Per ton
Paraffin	2.000	1.00
Asphalt	0.250	0.175

Combined Production Tax (For November)

	Prod.	Export	Total
and Export Tax (United States Currency)			
Crude—			
(Sp. gr. 0.93=Be 20.83) per bbl.	$0.2006	$0.07948	$0.28008
(Sp. gr. 0.96=Be 15.68) or heav, per bbl.	0.1124	0.04928	0.16168
Fuel oil	0.1861	0.0636	0.2497
Gasoline—			
Crude, per gal	0.00457	0.00712	0.01169
Ref., per gal	0.00229	0.00356	0.00585
Kerosene—			
Crude, per gal.	0.00440	0.00227	0.00667
Ref., per gal	0.00220	0.001135	0.003335
Lubricants	0.00437	0.00210	0.00683
Paraffin—			
Per metric ton	1.00	0.44	1.44
Asphalt—			
Per metric ton	0.175	0.055	0.230

K-V Malleable Iron Fittings

The Kennedy line of fittings is exceptionally complete. It includes elbows, tees, return bends, couplings and many other types in black and galvanized malleable iron and also in brass.

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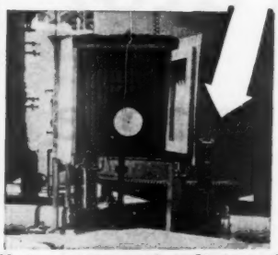

Note extreme simplicity of Robinson Orifice Fitting installation as well as small amount of space occupied.

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ROBINSON Orifice Fitting takes the place entirely of the old style "hook-up" with its awkward and expensive by-passing arrangement. By using this improved fitting you save the cost of "hook-up" labor and material. There is no by-pass valve to stick open and leak and thus cause meter inaccuracy.

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NEW LOCATIONS IN TEXAS PANHANDLE AND NORTH AND WEST TEXAS FIELDS

TEXAS PANHANDLE FIRST REPORTS

Hutchinson County

McMan Oil & Gas Co.'s No. 4 E. Cockrell-Martin, 230 feet north and 933 feet west of SE cor. of S half of NW¼ Section 3, Block B-3, D. & S. E.

Roberts County

Roco Oil Co.'s No. 1 W. T. Hammond, 5,610 feet south and 4,925 feet west of NE cor. of the Clay County School Land.

Wheeler County

Rook & Angus' No. 1 A. W. Smock-Linkey, C of SE of SE of Section 5, Block 24, H. & G. N. The Texas Company's No. 2 Dora L. Morgan, 660 feet south and 330 feet west of NE cor. of Section 93, Block 17, H. & G. N.

NORTH CENTRAL AND WEST TEXAS FIRST REPORTS

Archer County

Atlantic Oil Producing Co.'s No. 1 C. A. Mangold, 150 feet north and east of SW cor. of Section 30, Mangold Subdivision. Consolidated Oil Co. & Marland Oil Co.'s No. 1 B. S. Carter, 150 feet north and east of SW cor. of the south 40 acres of the north 80 acres of the B. S. Carter 160-acre tract out of Section 1, S. P. R. R., A-426. Shappell Oil Co.'s No. 10 L. F. Wilson-B, 450 feet north and east of SW cor. of the SE of the L. F. Wilson 160-acre tract out of Section 4, S. P. R. R., A-1,044. Atlantic Oil Producing Co. and F. Rose's No. 1 G. M. Benson, 150 feet north and 450 feet east of SW cor. of the east 60 acres of the south 160 acres of Section 1,829, T. E. & L. L. T. Burns' No. 1 L. T. Burns, 150 feet south and 593 feet west of the NE cor. of Section 27, Club Ranch Subdivision. Panhandle Refining Co. and Burton No. 2 W. R. Farmer-B, 150 feet south and west of the NE cor. of the west 80 acres of Section 1, North Anderson Ranch Subdivision. Lee Wilson's No. 2 W. R. Farmer, 150 feet north and east of the SW cor. of the east 40 acres of the south 80 acres of the west 160 acres of Section 2, North Anderson Ranch Subdivision.

Baylor County

Mel Richards' No. 2 J. A. Young, 365 feet south and east of the NW cor. of SE of NW of Section 2,426, T. E. & L.

Brown County

Canfill-Reynolds & Mitcham's No. 1 E. DeBush, 1,087 feet north and 703 feet west of the most northerly SE cor. of the E. DeBush 390.5-acre tract out of the Jose Padilla Survey No. 646.

Cooke County

Camp-Heydrick and Oil Operators Trust Co.'s No. 2 John Bayer, 1,250 feet north and 880 feet east of SW cor. of Section 1, John Barnett Survey, A-42, being 150 feet south and west of the NE cor. of their 30-acre lease. Same company's No. 1 Joe Fleitman, 110 feet south of the center of the road and 150 feet east of the west line of Block 82, town of Muenster. Miller Drilling Co. and others' No. 3 J. Koelzer, 125 feet south and 500 feet west of the NE cor. of Section 13, Thomas Scott Survey, A-900. Oil Operators Trust Co.'s No. 7 Ben Luke, 450 feet north and 515 feet west of the SE cor. of Block 89, town of Muenster.

Denton County

Gray & Adams' No. 1 E. M. Rucker, 933 feet south and 1,133 feet west of the NE cor. of the Hy Harmon Survey, A-617.

Eastland County

L. E. Edwards and others' No. 1 S. H. Studdard and others, 150 feet south and east of the NW cor. of Section 49, McLennan County School Lands, League 3 and 4.

Fisher County

The Texas Company's No. 1-A D. W. Stephens, 330 feet north and 930 feet west of the SE cor. of Section 79, Block 1, H. & T. C.

Howard County

Bristow & Merrick's No. 4 A. J. Hooks, 1,120 feet south and 200 feet east of the NW cor. of Section 140, Block 29, W. & N. W. Survey. Godley Oil Co.'s No. 2 A. J. Hooks, 1,520 feet south and 200 feet east of the NW cor. of Section 140, Block 29, W. & N. W. Survey. Marland Oil Co.'s No. 6 H. R. Clay-A, 1,120 feet south and 200 feet west of the NE cor. of Section 139, Block 29, W. & N. W. Survey. Same company's No. 7 H. R. Clay-A, 1,420 feet south and 200 feet west of the NE cor. of Section 139, Block 29, W. & N. W. Survey. Owens & Sloan's No. 2 Dora Roberts, 380 feet north and 330 feet east of the SW cor. of the SE of Section 136, Block 29, W. & N. W. Survey. Sweeney and others' No. 2 Otis Chalk, 2,310 feet south and 1,650 feet east of the NW cor. of Section 124, Block 29, W. & N. W. Survey. Same company's No. 3 Otis Chalk, 2,310 feet south and east of the NW cor. of Section 124, Block 29, W. & N. W. Survey. Same company's No. 4 Otis Chalk, 1,650 feet south and 2,310 feet east of the NW cor. of Section 124, Block 29, W. & N. W. Survey. Same company's No. 5 Otis Chalk, 2,310 feet north and 1,650 feet east of the SW cor. of Section 124, Block 29, W. & N. W. Survey.

Jack County

Chandler and others' No. 2 Ira Coats, 900 feet north and 150 feet east of the SW cor. of the east 50 acres of the Ira Coats 200-acre tract out of the Hrs. W. Berryman Survey, A-40. Connell & Wixon's No. 1 J. R. Sloan, 150 feet south and east of the NW cor. of the north 50 acres of the east 100 acres of Section 1, J. W. Williams Survey, A-877. Hicks & McNabb's No. 1 J. E. Moore, 150 feet south and east of the NW cor. of the J. E. Moore 177-acre tract out of the Hrs. W. Berryman Survey, A-40. Holman heirs' No. 4 Mrs. L. Holman heirs, 250 feet north and 1,158 feet west of the SE cor. of the NE of Section 4, S. P. R. R. Survey, A-1,422. O'Neal & White and others' No. 2 Anna B. Street and others, 150 feet south and 480 feet east of NW cor. of Section 3,333, T. E. & L. Survey. Thedford Brothers' No. 4 Richards & Lanier, 850 feet south and 750 feet east of the most westerly northwest cor. of the B. B. B. & C. Survey, A-93.

Jones County

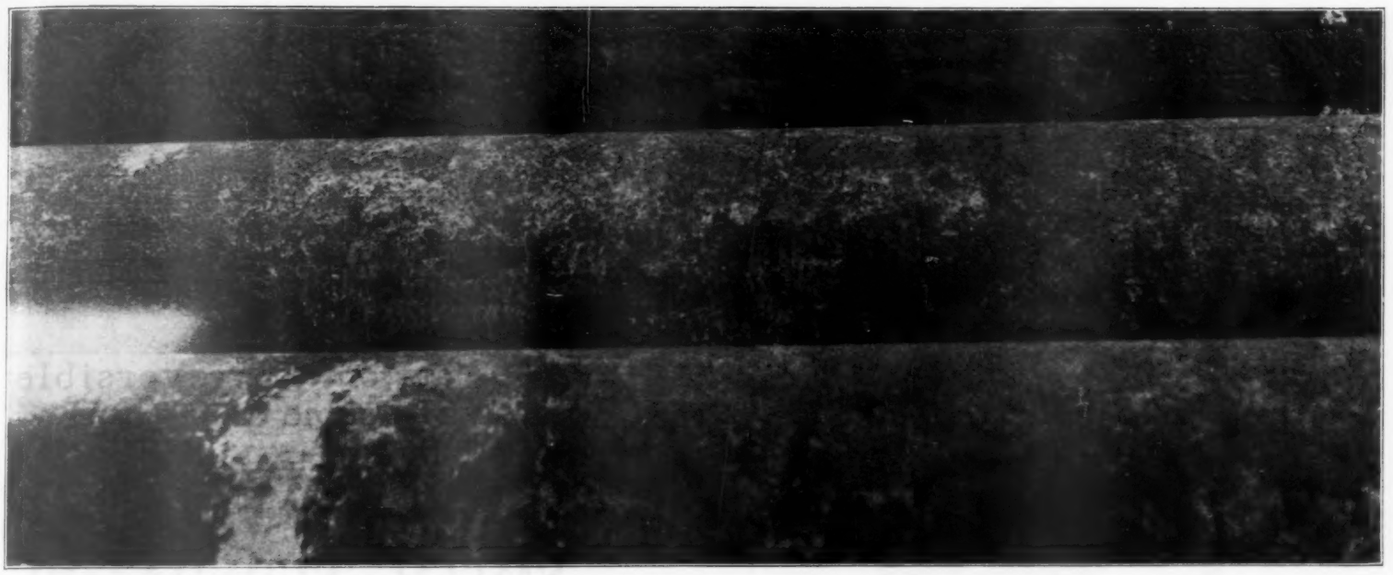
Gibson & Johnson's No. 1 R. J. Camp, 330 feet south and east of the NW cor. of the R. J. Camp tract out of Section 251, S. M. Hale Survey, A-202.

Montague County

Continental Oil Co.'s No. 1 Mrs. E. C. Edmondson, 225 feet south and 150 feet west of the NE cor. of the south 60 acres of the Mrs. E. C. Edmondson 96.5-acre tract out of the R. T. Edmondson Survey, A-222. Same company's No. 23 J. W. Maddox-A, 1,107 feet south and 150 feet west of the NE cor. of Lot No. 13, S. H. Arnold Survey, A-5. Same company's No. 1 Mrs. M. H. Salmon-B, 1,200 feet south and 1,500 feet east of the NW cor. of the Mrs. M. H. Salmon 421-acre tract out of the F. Robertson Survey, A-620, being 150 feet north and 180 feet east of the most southerly SW cor. of their 100-acre lease. Pure Oil Co.'s No. 4 W. W. Jones, 150 feet south and west of the NE cor. of the south 100 acres of the north 180 acres of Section 6, J. W. Jones Subdivision, William Donoho Survey, A-178. Sinclair Oil & Gas Co.'s No. 1 J. S. Dennis, 150 feet south and 1,650 feet west of the NE cor. of the north 200 acres of the J. S. Dennis 383-acre tract out of the F. Robertson Survey, A-620. The Texas Company's No. 1 M. H. Salmon-H. S. Henley, 1,725 feet south and 1,200 feet east of the NW cor. of the Mrs. M. H. Salmon 421-acre tract out of the F. Robertson Survey, A-620, being 150 feet south and west of the NE cor. of their 20-acre lease. Oil Operators Trust Co.'s No. 1 S. Hedgepeth, 150 feet south and east of the NW cor. of the S. Hedgepeth 50-acre tract out of the S. A. Mills Survey, A-459.

Pecos County

Allsman & Bell's No. 5 Pecos River Bed, 750 feet north and 325 feet west of the SE cor. of Section 61, Block 1, I. & G. N. Survey, and located in the middle of the Pecos River, being 312 feet



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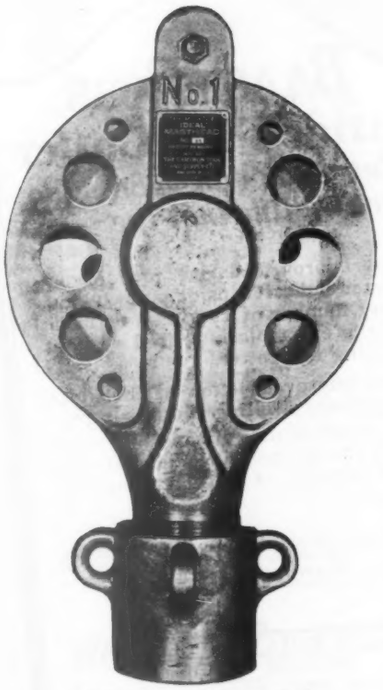

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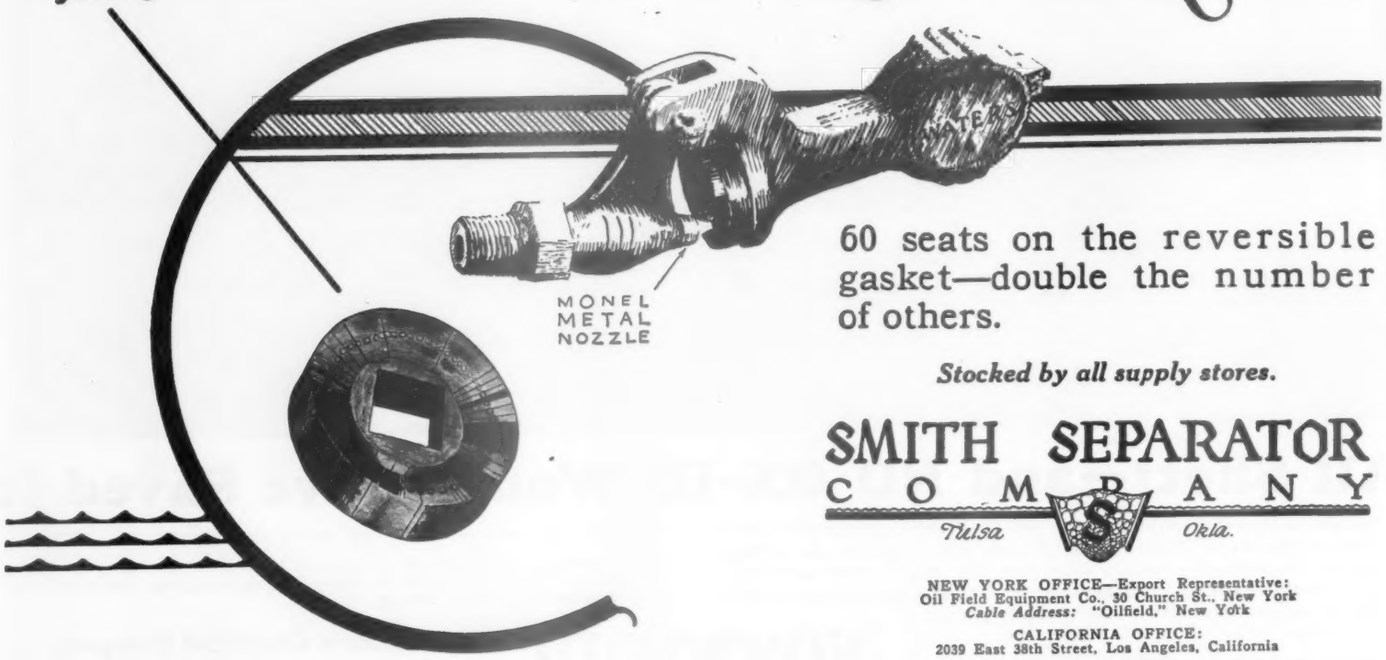

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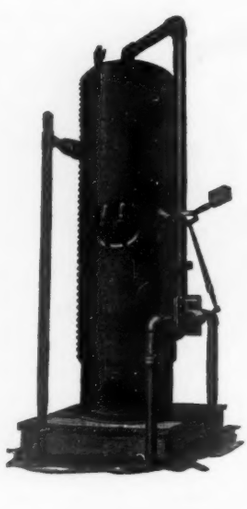

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northwest of their No. 4 well. Same company's No. 11 Pecos River Bed, 150 feet south and east of the NE cor. of Section 68, Block 1, I. & G. N. Survey, and located in the middle of the Pecos River. Kirby Petroleum Co. and Edson's No. 1 J. H. Tippett, 200 feet north and west of the SE cor. of the east 50 acres of the north 100 acres of the south 180 acres of Section 108, Block 194, G. C. & S. F. Survey. Mid-Kansas Oil & Gas Co.'s No. 5 Smith & Taylor, 1,714 feet south and 785 feet east of the NW cor. of Section 33, Block 194, G. C. & S. F. Survey. Same company's No. 6 Smith & Taylor, 2,249 feet south and 725 feet east of the NW cor. of Section 33, Block 194, G. C. & S. F. Survey. Same company's No. 10 I. G. Yates-A, 505 feet north and 2,900 feet west of the SW cor. of Section 60, Block 1, I. & G. N. Survey, and located in the I. G. Yates Survey, A-8,195. Same company's No. 11 I. G. Yates-A, 575 feet south and 2,900 feet west of the SW cor. of Section 60, Block 1, I. & G. N. Survey, and located in the I. G. Yates Survey, A-8,195. Same company's No. 2 I. G. Yates-D, 821 feet north and 1,936 feet east of the SW cor. of Section 62, Block 1, I. & G. N. Survey. Simms Oil Co.'s No. 3 Mrs. M. A. Smith, 861 feet north and 2,343 feet east of the SW cor. of Section 103, Block 194, G. C. & S. F. Survey. Mid-Kansas Oil & Gas Co.'s No. 1 Pryor & Wilson, 330 feet south and east of the NW cor. of Sec. 3, Block 5, T. C. R. R. Survey.

Runnels County

Gibson & Johnson's No. 1 J. W. Harris estate, 3,300 feet south and 660 feet west of the NE cor. of the Juliana Voske Cabrera Survey, No. 514. Same company's No. 1 H. P. Serratt, C of NW of Section 150, E. T. R. R. Survey.

Terrell County

Milham Corp.'s No. 1 Bassett, at the middle point of the north line of Section 99, Block Y, W. H. Robertson Survey.

Upton County

Champlin Oil & Refining Co.'s No. 3 J F. Lane, 330 feet north and 184 feet west of the SE cor. of SW of SE of Section 3, G. C. & S. F. Survey, A-212. Skelly Oil Co.'s No. 1 J. F. Lane, 330 feet north and 184 feet east of the SW cor. of the SE of SE of Section 3, G. C. & S. F. Survey, A-212. Tulsa Drilling Co. and others' No. 1 W. A. Chaney, 330 feet north and 660 feet west of the SE cor. of the NW of Section 18, Block 3, M. K. & T. Survey.

Wichita County

Consolidated Oil Co. and The Texas Company's No. 1 W. T. Waggoner, 150 feet north and west of SE cor. of NW of Section 35, Block 5, H. & T. C., A-105. Henry Hobbs' No. 1 W. L. Hodges, 1,550 feet south and 150 feet west of the northeast corner of the W. L. Hodges 214-acre tract out of Section 1, H. T. & B., A-139, being 450 feet south and 150 feet west of the NE cor. of Lot No. 6, W. L. Hodges Subdivision. John O'Neil and others' No. 2 Kemp & Kempner, 150 feet south and east of the NW cor. of the NE of Section 58, Kemp Wichita Valley Land. Vergate Oil Co.'s No. 2-Deep, Kemp & Kempner, 1,570 feet south and 1,038 feet west of the NE cor. of Section 55, Kemp Wichita Valley Land.

Wilbarger County

Fain-McGaha Oil Corp.'s No. 1 W. T. Waggoner-M, 150 feet north and east of the SW cor. of the SW or SW of Section 24, H. & T. C. Landreth Production Corp.'s No. 1 F. L. Carter, 1,050 feet north and 150 feet east of SW cor. of the SE of Section 35, Block 6, H. & T. C. Milham Corp.'s No. 13 W. T. Waggoner-B, 1,950 feet south and 1,050 feet west of the northeast corner of their "B" lease out of Section 31, Block 4, H. & T. C. Phillips Petroleum Co.'s No. 2 W. T. Waggoner-C, 220 feet south and 150 feet east of the NW cor. of the NW of the SE of Section 47, Block 2, H. & T. C. Same company's No. 12 W. T. Waggoner-F, 166 feet south and 825.7 feet west of the northeast corner of their "F" lease out of Section 46, Block 4, H. & T. C. Same company's No. 22 W. T. Waggoner-QQ, 489.8 feet north and 916.4 feet east of the southwest corner of their "QQ" lease out of Section 47, Block 4, H. & T. C. Same company's No. 2 W. T. Waggoner-SS, 220 feet south and east of the NW cor. of the SW of SE of Section 43, Block 4, H. & T. C. Prairie Oil & Gas Co.'s No. 5 W. T. Waggoner-B, 300 feet south and west of NE cor. of the SE of Section 44, Block 4, H. & T. C. Roxana Petroleum Corp.'s No. 4 W. T. Waggoner-D, 268 feet sout hand 266 feet east of northwest corner of their "D" lease out of Section 42, Block 4, H. & T. C. Waggoner Refining Co.'s No. 1 W. T. Waggoner-E, 150 feet north and east of the SW cor. of the NE of NE of Section 30, Block 4, H. & T. C.

Winkler County

Humble Oil & Refining Co.'s No. 3 Ida Hendrick-B, 2,310 feet north and 330 feet west of the SE cor. of Section 29, Block B-5, School land. Southern Crude Oil Purchasing Co.'s No. 1 Ida Hendrick, Tract 88-C, 990 feet north and 2,310 feet west of the SE cor. of Section 28, Block B-5, School Land.

Young County

Atlantic Oil Producing Co. and others' No. 3 J. E. Keen, 150 feet south and 1,650 feet east of the northwest corner of the J. E. Keen 250-acre tract out of Section 3,401, T. E. & L. Atlantic Oil Producing Co. and F. Rose's No. 1 C. H. Mothes, 150 feet south and east of the northwest corner of the north 37 acres of the C. H. Mothes 76.7-acre tract out of Section 2,445, T. E. & L. P. F. Gwynn and others' No. 2 G. W. Christian, 750 feet north and 150 feet east of the SW cor. of Section 1,593, T. E. & L. Coones & Hotchkiss' No. 3 J. E. Morrison Co., 15 feet north and 1,451 feet east of the southwest corner of the B. W. Hammond Survey, A-1,320, being 15 feet north and 200 feet east of the southwest corner of their lease. Same company's No. 4 J. E. Morrison Co., 200 feet south and east of the northwest corner of the E. Sherill Survey, A-271. Nash & Windfohr's No. 2 W. B. Hinson, 200 feet north and 570 feet west of the southeast corner of the W. B. Hinson 47.5-acre tract out of the P. Pier Survey, A-219. Pitzer & West's No. 3 J. E. Morrison Co.-B, 600 feet south and 200 feet east of the northwest corner of the east 40 acres of the west 60 acres of the J. E. Morrison Co. 122-acre tract out of the E. Sherill Survey. A-271.

Corrected Locations

In Archer County: Carey & Rhader's No. 2 W. R. Farmer, 150 feet north and 150 feet east of the southwest corner of the east 20 acres of the west 40 acres of the S half of Section 2, North Anderson Ranch Subdivision.

In Jack County: Chandler and others' No. 1 Ira Coats, 150 feet north and east of the southwest corner of the east 50 acres of the Ira Coats 200-acre tract out of the Hrs. W. Berryman Survey, A-40.

In Haskell County: C. D. Shaffer's No. 1 S. W. Scott, 1,000 feet north and 500 feet west of the southeast corner of P. A. Taylor Survey No. 145, A-388.

In Crockett County: World Oil Co.'s No. 1 L. P. Powell, 1,188 feet south and 330 feet east of the NW cor. of Section 62, Block BB, G. C. & S. F.

In Upton County: Champlin Oil & Refining Co.'s No. 1 J. F. Lane, 330 feet north and 236 feet east of SW cor. of SW of SE of Section 3, G. C. & S. F., A-212. Same company's No. 2 J. F. Lane, 330 feet north and 634 feet west of the SE cor. of the SW of SE of Section 3, G. C. & S. F., A-212.

In Young County: Coones & Hotchkiss' No. 2 J. E. Morrison Co., 700 feet north and 1,401 east of the southwest corner of the B. W. Hammond Survey, A-1,320, being 700 feet north and 150 feet east of the southwest corner of their lease. Pitzer & West's No. 1 J. E. Morrison-A, 700 feet north and 1,101 feet east of the southwest corner of the W. B. Hammond Survey, A-1,320. Same company's No. 2 J. E. Morrison Co.-A, 200 feet north and 1,051 feet east of the southwest corner of the B. W. Hammond Survey, A-1,320. Same company's No. 3 J. E. Morrison Co.-A, 200 feet north and 625 feet east of the southwest corner of the B. W. Hammond Survey, A-1,320. Same company's No. 4 J. E. Morrison Co.-A, 685 feet north and 200 feet east of the southwest corner of the B. W. Hammond Survey, A-1,320. Same company's No. 5 J. E. Morrison Co.-A, 200 feet north and 200 feet east of the southwest

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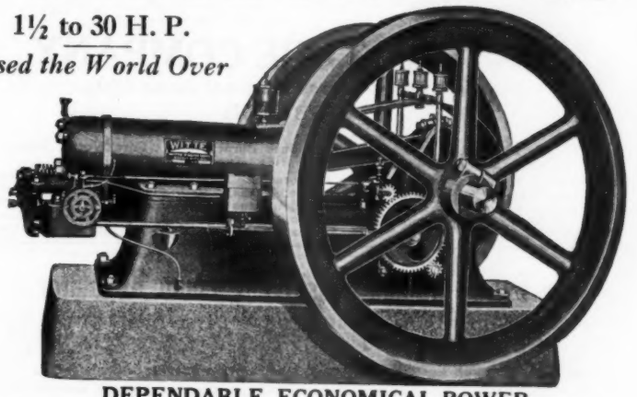

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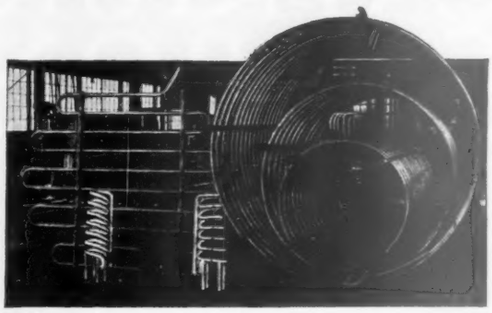

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corner of the B. W. Hammond Survey, A-1,320. Same company's No. 2 J. E. Morrison Co.-B, 200 feet south and 200 feet east of the northwest corner of the east 40 acres of the west 60 acres of the J. E. Morrison Co. 122-acre tract out of the E. Sherrill Survey, A-271. United Royalty Corp.'s No. 1 W. H. Thompson, 919 feet northeast of the southwest line and 1,750 feet northwest of the southeast line of Section 2,692, T. E. & L., A-1,131.

WEST TEXAS DAILY AVERAGE PRODUCTION

Week ending November 12, 1927

CRANE COUNTY

Church-Fields-McElroy Pool

Company and lease	Wells	Bbls.
Church et. al, University	1	115
Church & Fields, University	3	1,638
Church & Fields, Duoil-Univ	1	145
Eastland Oil & Collett, University	8	10,295
Gulf Prod. Co., all leases	63	21,386
Humble O. & R. Co., University	12	6,871
Independent O. & G. Co., University-A	2	Off
University-B	1	Off
Landreth Prod. Corp., Cowden-Anderson	16	14,012
Magnolia Pet. Co., Univ.-Hardwicke	10	4,284
Univ.-O'Keefe	10	1,312
State-Lasseter	3	34
Magnolia Pet. Co. et al, University	4	47
Pecos Oil Co., University	11	4,333
Prairie O. & G. Co., University	6	65
State-Lasseter	4	4,580
Simms & Atlantic, University-A	9	5,491
University-B	1	72
University-C	8	*22,618
University-D	8	*5,695
University-E	1	266
Totals, Simms & Atlantic	26	34,142
Stidham & Thrasher, University	1	12
The Texas Co., University	1	221
Univ.-Beasley	1	30
Tidal Oil Co. et al, University-B	2	54
University-C	1	35
University-E	1	32
University-F	7	*3,263
University-G	2	*422
University-H	2	40
University-I	5	*3,948
Totals, Tidal Oil Co. et al	19	7,854
Totals, Church - Fields - McElroy Pool	205	105,884

Miscellaneous, Crane County

Gulf Prod. Co., Waddell	1	21
Independent O. & G. Co., Hughes	1	7
McMan O. & G. Co., Hughes	2	85
Marland Oil Co., all leases	16	883
The Texas Co., King	9	241
Union-Land-F	1	4
Miscellaneous totals	30	1,241
Grand totals, Crane County	235	107,125

CROCKETT COUNTY

Cromwell et al, Powell	3	130
Cush Ref. & Gaso. Co., Powell	2	325
Gulf Prod. Co., Powell & Thompson	7	451
J. K. Hughes Dev. Co., Powell	5	220
Humble & Marland, Powell	9	302
Powell-B	3	551
Sorg	1	0
Republic Prod. Co., Powell	2	120
Roxana Pe., Corp., Powell	1	14
Taylor-Link and Kirby Pet., Powell	1	183
Totals, Crockett County	34	2,166

ECTOR COUNTY

The Texas Co. & J. S. Cosden, Connell-A	1	12

GLASSCOCK COUNTY

Texon & Marland, Settles	2	(†)

HOWARD COUNTY

Bristow & Merrick, A. J. Hooks	3	100
Comet Pet. Co., H. R. Clay	2	24
Dixie Oil Co., H. R. Clay	1	10
F. H. E. Oil Co., John Roberts	1	75
Godley Oil Co., A. J. Hooks	1	82
Gulf Prod. Co., Chalk	1	8
Harrison et al, Dora Roberts	1	20
Humble O. & R. Co., Douthit	2	35
Lockhart & Co., Chalk & Scott	7	147
Magnolia Pet. Co., all leases	39	2,011
Marland Oil Co., all leases	32	1,067
Harland & Group 1 Oil, Harding	1	Off
Midwest Expl. Co., H. R. Clay	2	54
Owens & Sloan, John Roberts	1	25
Pure Oil Co., Chalk & Hooks	4	310
Reeves & Apperman, H. R. Clay	2	80
Sweeney et al, Chalk	1	160
Tidal Oil Co., Otis Chalk	2	50
Totals, Howard County	103	4,248

JONES COUNTY

Atlantic O. P. Co., Howell	1	0
Marland Oil Co., Mason	3	340
Midwest Expl. Co., Thornton	4	175
Phillips Pet. Co., Tessie-Walling	4	250
Joe Winter	3	270
R. M. Beasley	1	75
J. C. Mason	1	140
H. B. Vestal	1	80
Stebbins Oil Co., Higgs	1	16
Totals, Jones County	19	1,348

LOVING COUNTY

Lockhart & Co., Allen	1	75

MITCHELL COUNTY

Atlantic O. P. Co., Womack	3	225
California Co., all leases	96	2,422
F. J. Carey, E. Morrison	1	20
Eastland Oil Co., all leases	9	178
Magnolia Pet. Co., all leases	22	498
Tidal Oil Co., both leases	2	30
Totals, Mitchell County	138	3,373

PECOS COUNTY

Allsman & Bell, River bed	2	639
California Co., Yates	4	5,007
Smith	3	1,207
Gulf Prod. Co., M. A. Smith	1	217
Humble O. & R. Co., M. A. Smith	2	415
Marland Oil Co., Yates-A	4	1,138
McMan & Marland, Yates	6	4,135
Mazda Oil & Savoy Oil, Smith	1	68
Mid-Kansas & Transcont., Yates-D	1	889
Smith-Taylor	2	1,770
Yates-A	7	8,804

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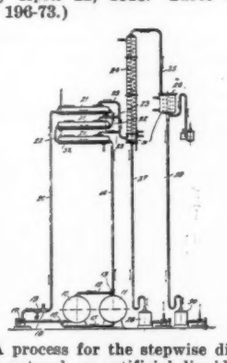
Yates-C	2	650
Totals, Mid-Kansas & Transcont.	18	17,624
Red Bank Oil Co., Smith	1	75
Roxana Pet. Corp., Tippett	1	647
Smith-A	1	86
Simms Oil Co., Smith	2	1,081
Texon O. & L. Co., Yates	1	0
Totals, Pecos County	47	32,339
REAGAN COUNTY		
Big Lake Oil Co., University	121	17,488
Texon O. & L. Co., University	79	5,412
Totals, Reagan County	200	22,900
RUNNELS COUNTY		
Ladd, Sillix et al, McMillan	1	100
SCURRY COUNTY		
Northwest Oil Co., all leases	5	45
UPTON COUNTY		
Amerada Pet. Corp., Hughes	6	337
Atlantic O. P. Co., Sherk	1	32
Bryant & Atlantic, Baker	2	43
Champlin O. & R. Co., Lane	1	1,009
Dixie Oil Co., Burleson	26	1,887
Hughes	10	166
Gulf Prod. Co., all leases	18	2,775
Humble O. & R. Co., Burleson	4	27
Ricker	6	851
Independent O. & G. Co., Burleson, Wooley & Taylor	26	701
McMan O. & G. Co., Baker	2	25
Marland Oil Co., all leases	75	2,355
Prairie O. & G. Co., J. F. Lane	4	717
Allie Lane	4	728
Pure Oil Co., Lane	1	67
Republic Prod. Co., Baker	6	119
Roxana Pet. Corp., Bowen	26	1,887
Estep	3	74
Hughes	10	327
Simms Oil Co., Shirley	3	43
Snowden & McSweeney, Hughes	1	179
Sun Oil Co., Burleson & Taylor	10	194
The Texas Co., Burleson	4	34
King	12	335
Perry	3	750
Texon O. & L. Co., Sherk	1	14
Tidal Oil Co., Hughes	1	90
Burleson	2	15
Texas Pacific C. & O. Co., Burleson	1	20
Lane-A	10	2,565
Lane-B	1	24
Sherk	4	117
Wentz Oil Corp., Sherk	3	118
White Eagle O. & R. Co., Hughes	1	15
Totals, Upton County	283	18,640
WINKLER COUNTY		
Cranfill & Reynolds, Ida Hendrick	1	4,565
Gulf Prod. Co., Hendrick	2	2,075
Independent O. & G. Co., Hendrick	1	28
Landreth & Roxana, Hendrick	2	1,828
Murchison Oil Co. & Cranfill Bros., Grisham-Hunter	2	305
Grisham-Hunter	1	243
Pure Oil Co., Grisham-Hunter	1	888
Roxana Pet. Corp. & Llano Oil Co., Scarborough	1	20
Southern Crude O. P. Co., T-67 Hendrick-A	1	263
T-67 Hendrick-C	2	710
T-88 Hendrick-A	1	865
T-88 Hendrick-B	1	5,125
Totals, Southern Crude O. P. Co.	5	6,963
Texon O. & L. Co., Grisham-Hunter-A	1	546
Totals, Winkler County	17	17,461
Grand totals, West Texas	1,091	209,832

*Production partially pinched.
†Shut down for storage.

Recent Patents

1,646,698. Fractional Distillation Process and Apparatus. Heinrich Koppers, Essen-Ruhr, Germany, assignor to The Koppers Development Corp., a corporation of Pennsylvania. Filed July 6, 1921, Serial No. 482,804, and in Germany April 22, 1918. Three claims. (Cl. 196-73.)



2. A process for the stepwise distillation of natural or artificial liquid mixtures of ingredients which have different boiling points, for separating the ingredients at different boiling points, one group of ingredients at a time, which consists in: passing a quantity of such mixture in a constant current through a vaporizing device whose temperature and pressure conditions are regulated to distill the highest boiling point ingredient of the group to be eliminated; passing the eliminated ingredients into a dephlegmator whose temperature is regulated for separating one fraction;

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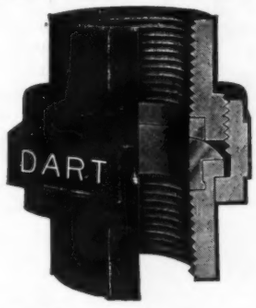

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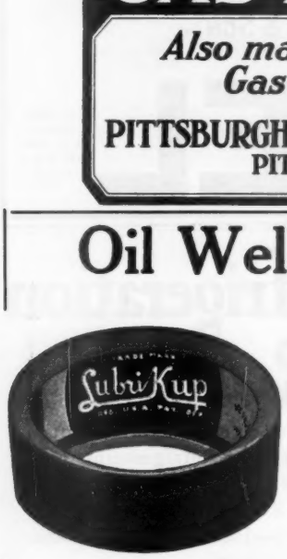

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"LUBRIKUPS" Hard used in deep wells where pressure is sufficient to expand.
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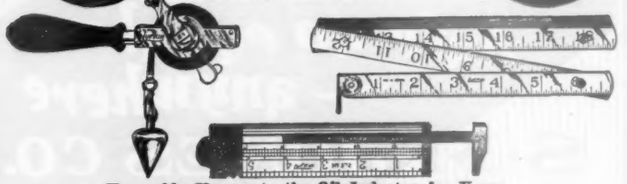

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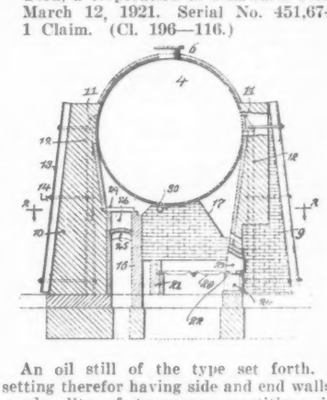
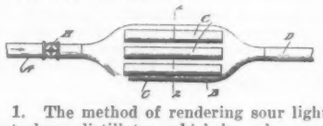
passing the remainder of the eliminated ingredients to a cooler whose temperature is regulated to take off the other fraction; discounting the elimination of such group of ingredients and regulating the temperature and pressure conditions in the vaporizing device and in the final cooler for the elimination of another higher boiling point groups; and then passing the remainder of said quantity of said mixture through the same vaporizing device and passing the ingredients vaporized therein into the same dephlegmator and into the same cooler.

1,647,664. Side-Furnace Oil Still. Robert A. Porterfield, Baltimore, Md., assignor to Prudential Oil Corp., New York, a corporation of Delaware. Filed March 12, 1921. Serial No. 451,674. 1 Claim. (Cl. 196—116.)



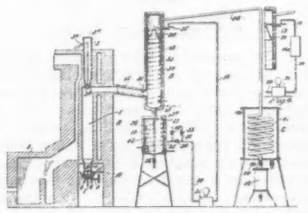
An oil still of the type set forth, a setting therefor having side and end walls, a plurality of transverse partitions in the space enclosed by said walls, a plurality of heating furnaces respectively disposed in the several compartments bounded by said partitions and having their fire-chambers directly below the exposed bottom of said still, said partitions normally extending upward to, but not in supporting contact with, the still bottom, the clearance spaces between said partitions and the still bottom being normally open for the entrance of combustion gases, and of such order that when the bottom sags under high heat it will be supported on said partitions, and an offtake flue in open communication with said compartments and said clearance spaces.

1,647,459. Method of Obtaining Sweet Doctor Test. Ernest B. Miller, Baltimore, Md., assignor to the Silica Gel Corp., Baltimore, Md., a corporation of Maryland. Filed November 10, 1924. Serial No. 749,016. 3 Claims. (Cl. 196—144.)



1. The method of rendering sour light petroleum distillates, which have been refined by treatment with a porous adsorbing material, "sweet" to the doctor test, consisting in exposing the product thus refined to actinic rays.

1,647,445. Treating Oil with Aluminum Chloride. Frank W. Hall, Port Arthur, Tex., assignor, by mesne assignments, to The Texas Company, New York, a corporation of Delaware. Filed March 15, 1920. Serial No. 365,859. 19 Claims. (Cl. 196—54.)



9. In the treatment of hydrocarbon oils with aluminum chloride, the process that comprises establishing and maintaining a stream of liquid oil and bringing aluminum chloride vapors into contact

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As your organization expands and you need new and larger equipment to take place of the old, do not rush your good used equipment to the junk pile.

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Thousands of men read the Classified Wants Section every week. They would be glad to pay for the good equipment that is being discarded.

Never discard any good used equipment before trying to sell it through the Classified Wants Section of The Oil and Gas Journal.

Write a simple description of the used equipment you would like to sell and mail it to the Classified Wants Section. It will help you.

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No matter where you are, if you have a well to shoot write or wire us and we will get to you. And you may depend upon it, we will send an Eastern expert who knows his business.

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FOR DRILLING PUMPING AND PIPE LINE WORK

Hundreds are now used in the oil fields. Their satisfactory operation for years is the best recommendation to you.

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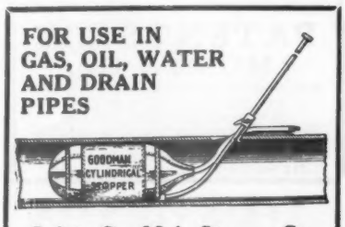
FOR USE IN GAS, OIL, WATER AND DRAIN PIPES



Safety Gas Main Stopper Co.
523 Atlantic Ave.,
Brooklyn, N. Y.

with said stream of oil in a chamber maintained at such temperature that distillation takes place therein.

19. In the treatment of hydrocarbon oils, the process that comprises charging aluminum chloride vapors and heated oil into a reaction chamber and maintaining the contents of the chamber at a temperature sufficient for the conversion of higher boiling hydrocarbons into lower boiling ones solely by the heat of the oil and aluminum chloride introduced into the chamber.

ATTITUDE MADE CLEAR BY PRESIDENT CLARK

The American Petroleum Institute announces that E. W. Clark, president of the Institute, has addressed the following communication to Hubert Work, chairman of the Federal Oil Conservation Board, Washington, D. C., in answer to a letter dated October 14:

"In answer to your letter of October 14, I suggest that Messrs. Thomas A. O'Donnell, J. Edgar Pew and W. S. Farish, three past presidents of the American Petroleum Institute, serve on the committee of nine referred to. Such engineering or other assistance as they may call for will be made available.

"I am sure that you will understand that in complying with your request I cannot undertake to pass upon, st ll less accede to, any suggestion that the Federal Government may directly regulate the production of crude oil in the several states, or that it should attempt to do so. Your purpose, if I read your letter aright, especially in the light of the previous statements of the Federal Oil Conservation Board, is to bring about a comprehensive study under the auspices of such a committee as you propose, and I understand that whatever its report may be there will be entire liberty on the part of all concerned to judge the report on its merits without any implication that the appointment of members of the committee will constitute a commitment on any questions of law or of policy involved.

"I make the foregoing statement not because I believe the Conservation Board has any other understanding of the matter, but solely to avoid any possible misunderstanding on the part of the industry or the public unfamiliar with the entire record. The press announcement of the Conservation Board, dated October 29, suggesting that the joint committee will have the liberty and duty to consider both 'the necessity and wisdom of asking Congress to take definite steps to protect the remaining oil deposits of the country' in and of itself demonstrates clearly that all parties can enter upon the study in a broad and constructive spirit."

West Texas Crude Stocks Show Gain Of 2,000,000 Bbls.

West Texas crude oil stocks increased nearly 2,000,000 bbls. during October according to the monthly pipe line figures, while production of that district during the same month increased a little more than 1,000,000 bbls. On November 1 the total stocks in large steel storage amounted to 9,826,901 bbls. Total production for October was 6,472,508 bbls.

Pipe line deliveries from the district totaled 3,260,000 bbls. Humble Pipe

LEGAL

TRIBAL OSAGE OIL LEASES AT PUBLIC ACTION

December 12, 1927, by United States Government.

December 12, 1927, at Pawhuska, Oklahoma, about 19,360 acres will be offered for oil leases in quarter section tracts. Bids will be for bonus in addition to royalties, 25% payable on day of sale, balance in three annual installments, with acceptable security. Within advertised area there are about 9,903 oil wells producing from one barrel to 1,000 barrels each, the total daily production for September, 1927, being about 62,000 barrels; also there are about 60 wells drilling. All lands are now leased separately for gas. Blue print maps of area advertised, showing tracts producing oil or gas, can be had for fifty cents each, also logs of producing oil or gas wells for twenty-five cents each well. Write U. S. Superintendent, Osage Agency, Pawhuska, Oklahoma, for maps, logs or other information.

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Manufacturers

"Electric Steel Castings—Electrically Annealed," "Certified Malleable Iron Castings," "Meehanite Metal Castings," Gray Iron Castings, and Special Analysis Castings.

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Steel Oil Storage Tanks, Condensers, Stills, Refinery equipment of every kind.
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RITER-CONLEY COMPANY
General Offices—Pittsburgh, Pa.

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We wish to announce our entering into the Southwest Texas Fields including Winkler, Crane, Upton and Pecos Counties.

Preliminary lines by "Y" Level now in process.
Our service has been successfully conducted in Oklahoma for 18 months.

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DIAMOND POINTED TOOLS FOR ALL MECHANICAL PURPOSES

WRITE OR WIRE FOR CATALOGUE AND FULL PARTICULARS
THE DIAMOND DRILL CARBON CO.
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Complete Analyses

Made of Natural Gas Including Helium Content,
Thirty-five Dollars

Helium content only Twenty-five Dollars

THE HELIUM CO., Dexter, Kans.

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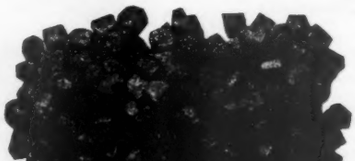
Read The Oil and Gas Journal every week.

It will keep you reliably informed and provide you with information not obtainable elsewhere.

U. S. INDUSTRIAL DIAMOND CORP.



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Carbon (Black Diamond) and Bort (Crystalline Diamond) for Diamond Core Drilling

Best shapes and qualities always in stock.

Parcels for examination and selection will be sent on request to reliable firms.

SKINNER Clamps stop leaks

Send for Catalog
M. B. SKINNER CO., 562 Washington Boulevard, CHICAGO

Line Co. ran 2,533,000 bbls. or an average of 81,700 bbls. daily through its lines from Reagan County to Comyn and to Ingleside (Corpus Christi) while Gulf Pipe Line Co. ran 727,000 bbls. through its line from Midland to Ranger, an average of 23,450 bbls. daily.

Tank car shipments amounted to 970,280 bbls. of crude, an increase of 98,014 bbls. over the figures for September. This is an average of 31,300 bbls. daily shipped out of the district by tank cars. (These figures, however, include 24,100 bbls. shipped during the month to the San Angelo Refining Co. at San Angelo which is within the district).

The Humble Oil & Refining Co. ran 322,755 bbls. during October to its own refinery at McCamey in Upton County, an average of 10,411 bbls. daily.

Following is a table summarizing the October figures:

	Bbls.
Total production	6,472,503
Increase over September	1,027,387
Pipe line runs from district:	
Humble from Reagan County	2,533,000
Gulf from Midland County	727,000
Total	3,260,000
Tank car shipments	970,280
Runs to Humble refinery at McCamey	322,755
Crude oil stock increase	1,878,600

This leaves about 41,000 bbls. unaccounted for. The figures are not exact in the case of the tank car shipments, however, because the shipments of some companies have to be estimated.

The largest stocks in Crane County on November 1, were held by Simms and Atlantic, the total having been 1,763,650 bbls. Landreth Production Corp. was second with 1,387,780 bbls., and Eastland Oil Co. and Collett came third with 800,100 bbls. in storage.

Upton County stocks belong mostly to Kay County Gas Co. (Marland), that company having had 696,080 bbls. Humble Oil & Refining Co. had 366,390 bbls. on hand in Upton County, also.

Storage Figures

Following are the storage figures by companies:

Company—	Bbls.
Crane County	
Church-Fields-Weekley	104,200
Eastland Oil Co. and Collett	800,100
Gulf P. L. Co.	56,100
Humble P. L. Co.	348,400
Kay County Gas Co.	16,500
Landreth Prod. Corp.	1,387,780
Magnolia P. L. Co.	234,440
Pecos Oil Co.	386,560
Prairie O. & G. Co.	160,000
Simms and Atlantic	1,763,650
Southern P. L. Co.	128,950
The Texas Company	4,950
Total	5,291,630
Crockett County	
Humble P. L. Co.	36,030
Jones County	
Bartex P. L. Co.	6,025
Mitchell County	
Magnolia P. L. Co.	319,200
Pecos County	
Humble O. & R. Co.	73,321
Illinois P. L. Co.	150,024

LEGAL

NOTICE OF RECEIVER'S SALE OF OIL AND GAS LEASE

Notice is hereby given that the undersigned Receiver will, under and by virtue of a certain judgment and decree of foreclosure made and entered by and in the District Court of Creek County, Oklahoma, in Cause No. 12673, wherein the Tulsa Rig, Reel & Manufacturing Company was plaintiff and Lawrence Anderson, Executor of the Estate of Clint Anderson, deceased, et al, were defendants and cross-petitioners, and by virtue of an order of sale issued out of said court and to me directed, on the 5th day of November, 1927, I will on the 10th day of December, 1927, at the hour of 10 o'clock A. M. offer for sale at public auction, at the North front door of the Courthouse in the City of Okmulgee, County of Okmulgee, Oklahoma, to the highest and best bidder for cash, free and clear of all liens and incumbrances, the following described property, towit:

An oil and gas mining lease on and covering the Northeast quarter of the Southeast quarter of Section 22, Township 15 North, Range 11 East, Okmulgee County, Oklahoma,

known as the Tabor lease, together with all of the oil wells, oil well casing, tubing, rods, pumps, engines, boilers, power plants, rigs, derricks, machines, machinery, houses and equipment of every kind and character thereon and thereunto belonging.

Said sale will be made subject to confirmation by the District Court of Creek County, Oklahoma, and possession of said oil and gas mining lease, together with all of the appurtenances thereon and thereunto belonging, will be delivered to such purchaser immediately upon approval of said sale.

Full information concerning the five wells on said lease, the amount of production, material and equipment thereon may be had on application to the undersigned at his office in the city of Okmulgee, Oklahoma, or to Mosier & Mosier, Attorneys, Muskogee National Building, Muskogee, Oklahoma.

L. E. COX,
Receiver.

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Oil and Gas and Land Practice in Winkler County Field
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County and District Catalog on Application
HEYDRICK MAPPING COMPANY
Wichita Falls, Texas

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The various fractions coming from crudes demand minute regulation of the treating agent in order to keep within "specifications."

Hills-McCanna Chemical Proportioning Pumps are designed for just that sort of service. Once the laboratory analyzes the grade, the pumps may be regulated to feed chemicals from a single drop to an intermittent stream of 10 gallons per minute—directly into counter current—without attendance and regardless of pressure or temperature.

Hills-McCanna Chemical Proportioning Pumps are made in all sizes—for continuous treating, batch treating or experimental plants. Write for Bulletin O-23.

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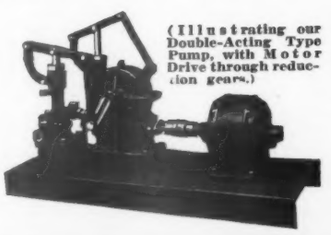

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NON-FERROUS ALLOYS
FORCE FEED LUBRICATORS
SPEED REDUCERS
CHEMICAL PUMPS

Simms Oil Co.	10,586
Total	233,931

Midland County

Atlantic Oil Prod. Co.	79,800
Gulf P. L. Co.	421,170
Magnolia P. L. Co.	220,870
Total	721,840

Reagan County

Big Lage Oil Co.	645,640
Humble P. L. Co.	739,440
Reagan Co. Pur. Co.	317,800
Total	1,702,880

Upton County

Humble P. L. Co.	366,390
Illinois P. L. Co.	106,350
Kay County Gas Co.	696,080
Roxana Pet. Corp.	2,160
Southern P. L. Co.	11,550
Texas Pacific C. & O. Co.	57,870
Total	1,240,400

Ward County

American Pet. Co.	30,660
Southern P. L. Co.	151,780
Total	182,440

Winkler County

American Pet. Co.	2,235
Gulf Prod. Co.	66,000
Southern P. L. Co.	24,290
Total	92,525
Grand total	9,826,901
Increase	1,878,600

TANK CAR DELIVERIES

Upton County

From Roxana Pet. Corp. to—
Roxana Pet. Corp., E. Chicago, Ill. 13,850
Roxana Pet. Corp., Wood River, Ill. 3,050
Roxana Pet. Corp., Galveston, Tex. 54,550

Soutern P. L. Co. to—
San Angelo R. Co., San Angelo, Tex. 24,100
Chalmette Pet. Corp., New Orleans 159,350
Mexican Pet. Corp., Destrahan, La. 288,800

Total Upton County 543,700

Ward County

American Pet. Co. to—
American Pet. Co., Houston, Tex. 50,700

Southern P. L. Co. to—
Liberty Oil Co., Gouldsboro, La. 37,800
Standard of Indiana, Whiting, Ind. 47,600
Chalmette Pet. Corp., New Orleans 68,450
Mexican Pet. Corp., Destrahan, La. 147,150

Total, Ward County 351,700

Reagan County

Big Lake Oil Co. to—
Rio Grande Ref. Co., El Paso, Tex. 31,000

County	Wells	Controlled Bbls.
Hutchinson	558	36,550
Carson	73	2,485
Gray	36	1,481
Wheeler	0	0
Potter	0	0
Totals	667	40,516

Jones County

Bartex P. L. Co. to—
Simms Oil Co., Dallas, Tex. 41,000

Runnels County

Humble P. L. Co. to—
Humble O. & R. Co., Texas City 2,880

Grand total 970,280
Increase 98,014

West Texas Production in October

Field, County—	Bbls.
Big Lake, Reagan	786,943
Chalk, Howard	109,513
Church-Fields, Crane	2,743,848
Connell, Ector	651
Hendrick, Winkler	395,578
McCamey-Taylor, Upton	653,652
McElroy, Crane	610,649
Noodle Creek, Jones	42,365
Powell, Crockett	91,399
Settles, Glasscock	2,738
Westbrook & Iatan, Mitchell	111,317
Wheat, Loving	1,354
Yates, Pecos	922,499
Grand total, October	6,472,508
Grand total, September	5,445,121
Increase	1,027,387

Pipe Line Runs by Counties

Crane County	2,056,879
Crockett County	86,518
Howard County	108,881
Jones County	42,149
Loving County	1,354
Mitchell County	114,690
Pecos County	590,976
Reagan County	619,918
Upton County	638,712
Winkler County	396,432
Grand total	4,656,509

Texas Panhandle Stocks Drop to 18,142,539 Bbls.

Stocks of crude in the Texas Panhandle dropped to 18,142,539 bbls. on November 1 according to the monthly figures which have just been compiled. Withdrawals from storage amounted to 10,232 bbls. daily. Total net receipts from the field for the month of October were 3,385,622 bbls., or 77,936 bbls. daily.

Tank car shipments decreased to 3,420 cars, as compared with 4,399 cars in August, two months ago.

Crude run from the Panhandle District through the Humble, Prairie and Gulf-Magnolia pipe lines averaged 58,225 bbls. daily or 1,805,010 bbls. during the month.

Gasoline production in October was 8,884,007 gallons, and of this amount 1,035 cars were shipped out. Gasoline storage on November 1 was 6,252,925 gallons, as compared with 5,957,134 gallons a month previous.

Pipe Line Shipments

	Daily Aver.	Total
Humble Pipe Line Co. from Burnett	28,616	887,104
Prairie Pipe Line Co. from Kings Mill	4,791	148,533
Gulf-Magnolia from Panhandle	24,818	769,373
Totals	58,225	1,805,010

Tank Car Shipments

			Cars
Atlantic O. P. Co.	to	Crown Central, Houston	49
Bartex P. L. Co.	to	Roxana Pet. Corp., New Orleans	30
		Gilliland Oil Co., Albuquerque, N. Mex.	20
		Standard Oil Co., Neodosha, Kan.	211
Champlin Ref. Co.	to	Champlin Ref. Co., Enid, Okla.	9
		Peerless Ref. Co., Chanute, Kan.	2
Bell Oil & Gas Co.	to	Texas City, Tex., and Chanute, Kan.	310*
Empire G. & F. Co.	to	Empire, Texas City	274
Humble P. L. Co.	to	Humble P. L. Co., Baytown	320*
Marland Oil Co.	to	Dalhart, Tex.	4
McMillan	to	Peerless Ref. Co., Chanute, Kan.	31
Pantex P. L. Co.	to	Peerless Ref. Co., Chanute, Kan.	22
Paramount Oil Co.	to	Peerless Ref. Co., Chanute, Kan.	18
Roxana Pet. Corp.	to	Roxana, Wood River, Ill.	870*
Sinclair O. & G. Co.	to	Sinclair, Houston, Tex.	950*
Skelly Oil Co.	to	Skelly Oil Co., Eldorado, Kan.	300
Totals			3,420

Tank Car Shipments

From	Cars
Amarillo	0
Isom	1,805
Kings Mill	11
Pampa	1,392
Panhandle	30
Lela	9
Sanford	49
Rockledge	124
Total	3,420

Controlled and Free Oil

There was little change in the relative quantity of "controlled" and "free" oil produced in the Panhandle during October, in comparison with other months. The following figures include the 10,232 bbls. of oil run from storage, net receipts from the field having been 77,936 bbls. daily.

County	Wells	Free Bbls.	Wells	Totals Bbls.
Hutchinson	426	31,042	983	67,592
Carson	87	6,424	160	7,909
Gray	128	9,929	164	11,410
Wheeler	36	1,230	36	1,230
Potter	1	27	1	27
	677	47,652	1,344	88,168

Crude Oil Stocks

Bartex Pipe Line Co. (Phillips Petroleum Co.) let all others in the amount of crude in storage in the Panhandle November 1, having 3,525,200 bbls. Magnolia Petroleum Co. was a close second, however. Following is a list of the 10 companies having the most Panhandle stocks:

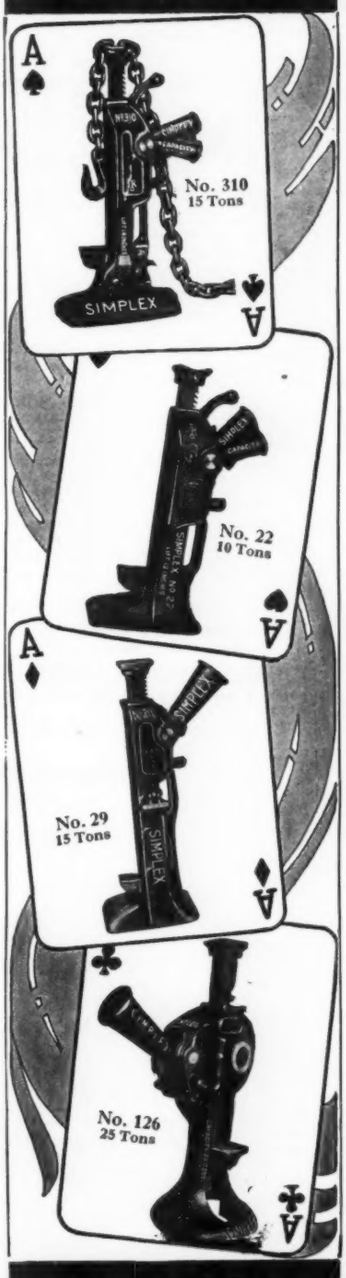
Company	Bbls.
Bartex P. L. Co.	3,525,200
Magnolia P. L. Co.	3,502,500
Gulf P. L. Co.	2,959,900
Prairie P. L. Co.	2,516,200
Marland Oil Co.	1,903,150
Skelly Oil Co.	881,000
Humble P. L. Co.	825,500
Plains P. L. Co.	654,300
Roxana Pet. Corp.	171,200
Empire G. & F. Co.	125,500
Japhet	107,500
McIlroy Oil Co.	106,700
Bell Oil & Gas Co.	106,500
Devonian Oil Co.	103,600

Natural Gasoline Production

County	Gallons
Hutchinson	6,126,305
Carson	1,432,951
Gray	842,892
Wheeler	436,081
Potter	44,778
Totals	8,884,007

Phillips Petroleum Co. produced nearly half of the entire natural gasoline output in October, having made more than 4,250,000 gallons. Skelly Oil Co. was also a big producer with a total of more than 1,900,000 gallons.

"4 Jacks" that are "Aces" in every oil field



Templeton, Kenly & Co., Ltd.
Sole Mfrs.
Chicago, Illinois

Simplex Jacks

At Your Supply House

Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS

Pipe Line Statement for September

Runs

Company—	Month	Dy. Av.
*Prairie P. L. Co.	4,440,000	148,000
Gulf P. L. Co.	1,520,497	50,683
Texas P. L. Co.	979,100	32,637
Magnolia Pet. Co.	1,800,476	60,016
Cosden P. L. Co.	1,043,868	34,795
Empire P. L. Co.	1,413,135	47,104
*Sinclair P. L. Co.	2,937,000	97,900
Oklahoma P. L. Co.	3,972,701	132,423
*Other lines	9,330,000	311,000
Total September	27,436,777	914,558
Total August	29,966,654	966,729

Shipments

Company—	Month	Dy. Av.
†Prairie P. L. Co.	5,321,180	177,373
Gulf P. L. Co.	1,037,883	34,596
Texas P. L. Co.	1,030,794	34,360
Magnolia Pet. Co.	1,822,192	60,740
Cosden P. L. Co.	1,128,668	37,622
Empire P. L. Co.	1,064,708	35,490
†Sinclair P. L. Co.	2,665,421	88,848
Oklahoma P. L. Co.	3,656,354	122,845
*Other lines	7,550,000	255,000
Total September	26,406,211	846,874
Total August	27,726,816	894,380

Stocks

*Prairie O. & G. Co.	30,600,000
*Prairie P. L. Co.	2,000,000
Gulf P. L. and Gypsy Oil Co.	9,525,009
The Texas Company	5,044,860
Magnolia Pet. Co.	6,062,711
Cosden P. L. Co.	3,188,696
Empire P. L. Co.	4,570,658
*Sinclair Crude Oil Pur. Co.	20,000,000
Oklahoma P. L. Co.	2,586,504
Carter Oil Co.	15,988,647
*Other lines	10,000,000
Total September	109,566,085
Total August	107,372,988
Difference	2,193,097

*Estimated. †Prairie Pipe Line shipments include Texas crude oil and Sinclair Pipe Line shipments include Texas and Wyoming crude oil.

Note: Stocks do not include approximately 5,000,000 bbls. of crude oil held in storage on private tank farms and leases, and approximately 1,750,000 bbls. of Texas Panhandle crude held in storage in Kansas and Oklahoma.

EASTERN PIPE LINES

Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for August and September:

	Aug. '27	Sept. '27
National Transit	146,479.36	148,770.19
S. W. Pa. P. L.	86,648.23	85,669.19
Eureka P. L.	395,237.33	386,301.76
Buckeye P. L. (Macksburg)	343,331.35	324,616.49
Buckeye P. L. (Cleveland)	11,953.23	11,430.57
Buckeye P. L. (Lima, etc.)	129,337.26	124,867.84
Indiana P. L.	8,905.59	9,150.58
Cumberland P. L.	267,515.04	245,038.71
N. Y. Transit	25,038.15	22,881.06
Tidewater P. L.	197,502.70	188,881.97
Pure Oil	164,866.70	159,336.57
Emery P. L.	59,569.14	57,479.57
Paragon Dev.	26,553.53	24,062.15
Pittsburgh P. L.	4,324.41	4,956.74
Stoll Oil Ref.	15,331.15	15,315.87
Total	1,886,983.19	1,808,560.83
Daily average	60,870.42	60,285.36

Note—Indian Refining Co. also reported other receipts of 275,393.93 bbls. Paragon Refining Co. had other receipts of 202,741.28 bbls. Paragon Development had other receipts of 24,753.46 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular diveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for August and September:

	Aug. '27	Sept. '27
National Transit	344,799.78	352,363.94
S. W. Pa. P. L.	343,310.98	352,286.47
Eureka P. L.	198,755.14	181,601.67
Buckeye P. L. (Macksburg)	153,543.57	144,078.47
Buckeye P. L. (Cleveland)	737.48	971.43
Buckeye P. L. (Lima, etc.)	743,093.86	861,075.42
Indiana P. L.	868,709.30	840,001.40
Cumberland P. L.	150,233.42	141,790.84
N. Y. Transit	333,844.19	316,049.51
Northern P. L.	196,321.52	188,878.47
Tidewater P. L.	150,113.65	132,684.94
Pure Oil	205,913.45	176,414.97
Emery P. L.	54,557.91	59,423.76
Paragon Ref.	177,675.03	202,284.12
Indian Ref.	379,066.52	342,732.80
Paragon Dev.	31,192.30	16,488.43
Pittsburgh P. L.	5,395.27	5,410.13
Total	4,398,243.43	4,326,277.16
Daily average	138,653.01	144,212.57

Gross Stocks

The gross stocks held by various pipe lines in the oil producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of August and September:

	Aug. '27	Sept. '27
National Transit	1,129,180.77	1,154,732.90
S. W. Pa. P. L.	662,536.32	648,789.30
Eureka P. L.	1,949,985.99	1,803,065.25
Buckeye P. L. (Macksburg)	416,668.27	421,560.39
Buckeye P. L. (Cleveland)	39,918.33	50,809.14
Buckeye P. L. (Lima, etc.)	4,668,116.54	4,829,631.04
Indiana P. L.	620,873.22	621,333.99
Cumberland P. L.	591,843.81	614,472.24
Southern P. L.	429,471.58	466,091.05
N. Y. Transit	460,922.97	507,169.10
Northern P. L.	470,103.63	534,035.12
Pure Oil	395,429.71	400,830.23
Emery P. L.	12,506.50	12,461.34
Paragon Ref.	15,696.20	15,860.76
Indian Ref.	93,156.64	122,910.52
Paragon Dev.	6,821.39	6,145.06
Pittsburgh P. L.	3,864.26	2,978.90
Total	11,989,116.18	12,212,716.43
Increase	535,987.21	223,601.25

Grades of Oil

The following table shows the amount of the different grades of oil held by the eastern pipe lines at the close of August and September, showing the gross stocks of the above fields:

	Aug. '27	Sept. '27
Pennsylvania	4,238,474.19	4,235,065.03
Lima	1,018,062.71	1,078,066.53
Kentucky	1,134,629.10	1,144,347.96
Mid-Continent	5,531,964.28	5,691,414.41
Illinois	65,894.90	63,823.51
Total	11,989,115.18	12,213,716.43

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1924	1925	1926	1927
Jan.	62,628	56,231	55,630	54,209
Feb.	68,923	60,606	60,394	61,398
Mar.	68,721	60,575	61,644	63,247
April	71,955	63,062	62,019	60,327
May	63,942	59,217	60,580	60,284
June	63,230	61,270	64,131	63,757
July	64,208	62,639	63,206	58,674
Aug.	59,942	59,686	61,815	60,876
Sept.	62,924	62,510	64,529	60,385
Oct.	64,976	60,995	62,704	.....
Nov.	56,282	59,250	61,774	.....
Dec.	55,814	57,974	58,755	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1924	1925	1926	1927
Jan.	145,518	157,889	156,966	141,227
Feb.	148,732	160,862	159,482	138,524
Mar.	147,098	154,591	150,239	133,777
April	147,611	151,429	152,371	140,227
May	134,997	146,995	160,998	144,894
June	143,019	149,467	160,257	149,772
July	124,187	161,238	160,945	151,350
Aug.	123,130	161,730	161,929	138,663
Sept.	127,325	156,719	158,915	144,213
Oct.	132,170	146,288	161,132	.....
Nov.	124,400	143,582	152,668	.....
Dec.	151,393	150,162	136,428	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1925	1926	1927
Jan.	11,353,276	9,959,170	9,718,008
Feb.	11,192,924	9,579,354	10,119,162
Mar.	11,158,297	9,438,293	10,794,044
April	11,062,083	9,805,851	11,113,295
May	11,207,562	9,531,757	11,359,381
June	11,092,796	9,585,804	11,492,673
July	11,067,453	9,734,687	11,453,138
Aug.	10,974,481	9,668,947	11,989,115
Sept.	10,781,753	9,433,732	12,212,716
Oct.	11,086,850	9,269,806	.....
Nov.	11,065,158	9,257,667	.....
Dec.	10,458,445	9,454,513	.....

Franklin Pipe Line Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above.

	Runs	Shipments	Stocks
1926—			
Sept.	2,788.18	2,373.06	13,985.63
Oct.	2,991.86	2,307.75	14,671.26
Nov.	2,810.60	1,664.55	15,817.31
Dec.	2,847.52	5,561.11	13,103.72
1927—			
Jan.	2,641.54	1,470.42	14,274.84
Feb.	2,764.30	1,082.82	15,956.32
Mar.	2,587.20	1,878.56	16,664.96
April	2,824.22	1,512.65	17,986.54
May	2,768.47	519.29	20,215.72
June	2,946.29	664.40	22,497.61
July	3,153.29	1,276.61	24,374.39
Aug.	3,057.89	3,713.11	18,719.17
Sept.	3,309.56	2,656.48	19,372.25

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, October 1	2,062,018.95
Other receipts	243,656.75
Runs from wells	591,009.13
Regular deliveries	495,432.70
Other deliveries	483,089.11

The amount of Illinois oil run by the Tidewater Pipe Co. in September was 28,580.36 bbls. and deliveries were 27,779.79 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

	Runs	Deliveries
1926—		
September	588,798.66	516,982.05
October	681,648.96	531,467.39
November	651,262.33	498,429.37
December	668,909.58	587,947.61
1927—		
January	621,421.02	520,085.98
February	595,831.16	476,950.71
March	737,693.91	554,947.48
April	593,225.37	444,518.49
May	726,759.40	543,192.02
June	640,975.85	532,317.78
July	612,901.30	484,902.53
August	651,376.49	539,331.37
September	619,589.49	423,312.49

Tidewater Pipe Co., Ltd., also delivered in September 218,329.09 bbls. of Oklahoma oil.

AVERAGE DAILY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS						Total All Ports
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total		
June	25,567	11,223	48,833	17,367	17,367	120,367	.....	.....	.....	.....	.....		120,367
July	13,484	17,290	23,065	9,129	5,451	78,419	.....	.....	.....	.....	.....	968	79,387
August	18,516	3,065	48,129	17,222	26,000	113,032	.....	.....	.....	.....	.....	.....	113,032
September	23,033	6,967	51,400	14,567	19,533	115,500	.....	.....	.....	.....	.....	.....	115,500
October	20,936	4,355	47,968	14,129	14,387	101,774	.....	.....	.....	.....	.....	.....	101,774

AVERAGE DAILY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS						Total All Ports
	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total		
June	18,167	9,700	83,867	10,900	16,567	139,200	2,000	31,800	.....	.....	33,800		173,000
July	22,226	10,387	80,193	7,193	28,710	158,710	3,226	25,065	806	.....	29,096		187,806
August	19,323	9,022	80,903	14,258	31,821	155,387	2,097	21,161	.....	.....	23,258		178,645
September	28,033	11,433	86,500	12,800	27,700	175,467	5,667	19,233	.....	2,600	28,500		203,967
October	26,064	13,097	79,355	3,838	24,097	156,451	1,613	19,323	806	1,871	23,613		180,064

GROSS PRODUCTION OF THE UNITED STATES FOR 12 MONTHS

(IN BARRELS)

		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mountains	Eastern Fields	Total
1926—										
October:	Month	18,966,058	15,720,689	19,001,388	3,714,637	4,625,138	3,166,559	3,071,720	3,398,000	70,664,189
	Daily average	611,808	507,119	612,948	119,827	149,198	69,589	99,088	109,613	2,279,490
November:	Month	19,173,128	16,876,950	18,593,160	3,593,490	4,299,480	3,064,911	2,842,587	3,216,000	70,649,706
	Daily average	639,104	562,565	619,772	119,783	143,316	68,497	94,752	107,200	2,354,990
December:	Month	20,276,950	17,882,908	19,753,591	3,654,156	4,266,189	2,018,734	2,658,301	3,318,000	73,323,829
	Daily average	654,096	576,868	637,212	117,876	137,619	65,120	85,752	106,871	2,361,414
1927—										
January:	Month	20,184,872	19,035,426	18,605,262	3,769,879	4,076,469	1,905,570	2,620,302	3,332,500	73,530,382
	Daily average	651,125	614,046	600,173	121,609	131,499	61,470	84,203	107,500	2,371,948
February:	Month	17,982,711	19,752,348	16,483,713	3,352,076	3,674,256	1,784,104	2,385,125	3,007,200	68,321,542
	Daily average	642,240	705,441	588,704	119,717	127,652	63,718	85,183	107,400	2,440,057
March:	Month	19,835,724	22,480,921	18,232,617	3,675,143	3,853,920	2,032,982	2,476,798	3,325,800	75,923,905
	Daily average	639,862	725,191	588,149	118,553	124,320	65,580	79,574	106,100	2,449,158
April:	Monta	19,493,825	22,308,120	17,801,140	3,516,930	3,278,240	1,994,330	2,615,770	3,474,000	74,483,365
	Daily average	649,879	740,271	593,371	117,231	112,608	66,491	87,193	115,800	2,482,745
May:	Month	19,506,054	23,258,463	19,539,083	3,704,314	3,493,669	1,935,175	2,742,588	3,467,000	77,646,346
	Daily average	629,238	750,273	630,291	119,494	112,699	62,425	88,471	111,839	2,504,721
June:	Month	19,181,443	22,530,330	18,299,810	3,437,580	3,365,760	1,880,820	2,592,437	3,330,000	76,018,179
	Daily average	639,381	761,011	613,327	114,586	112,192	62,694	86,414	111,000	2,500,606
July:	Month	19,319,021	26,522,546	17,607,194	3,464,082	3,406,582	2,279,406	2,635,697	3,273,000	78,597,528
	Daily average	623,194	855,566	567,974	111,422	109,893	73,529	85,020	105,596	2,535,401
August:	Month	19,379,131	26,283,349	17,715,229	3,424,570	3,242,600	2,199,905	2,530,065	3,603,400	78,383,250
	Daily average	631,987	847,850	571,459	110,470	104,600	70,964	81,615	116,400	2,526,366
September:	Month	19,064,500	24,111,660	18,332,800	3,342,240	3,032,970	2,027,070	2,333,609	3,245,000	75,484,849
	Daily average	635,483	803,722	610,760	111,408	101,099	67,569	77,820	111,500	2,514,331
Total 12 months		233,871,016	266,963,731	220,565,667	43,439,697	44,615,274	26,279,545	31,403,826	40,195,900	905,434,656

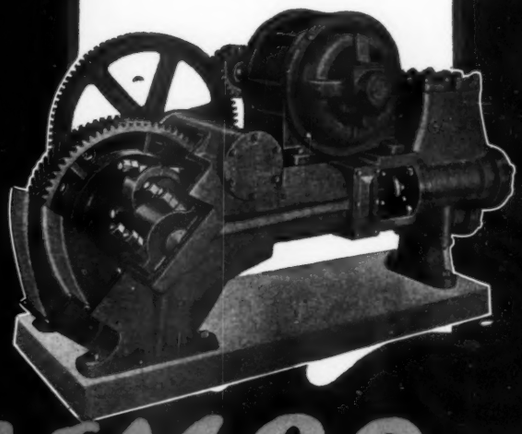
One step ahead!

Again GASO demonstrates its right to leadership in the field of oil-industry pumps. Here is illustrated its latest achievement—a heavy duty Gaso, a self-lubricating Gaso, an enclosed Gaso. And here are some of the features—

- Designed for pumping oil or water at pressures up to 1400 pounds.
- Completely enclosed. Photo shows part of cover removed.
- Self-lubricating, every part running in oil bath.
- Continuous tooth herringbone gears, center driven.
- Interchangeable liner fluid end in sizes from 2½ to 7 inches with 10-inch stroke.
- Pinion shaft bearings are TIMKEN ROLLER BEARINGS. Main bearings are lined with genuine babbitt.

Of course, you will want the full details of this latest Gaso model. A letter will bring them to you. Address

GASO PUMP & BURNER MFG. CO.
Tulsa · Oklahoma



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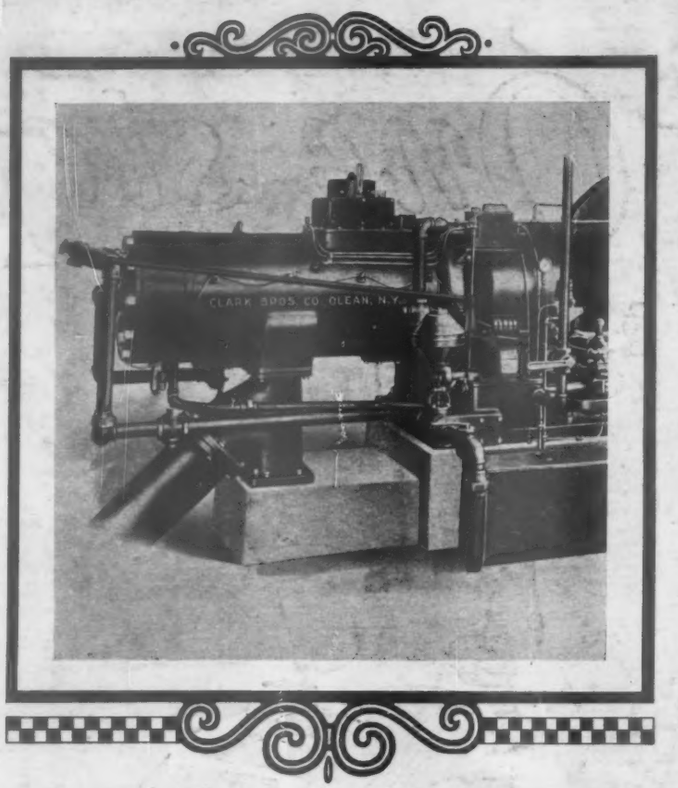
for every oil industry need

8 MONTHS of successful operation safeguard the operator's choice of the



CLARK SUPER "2"

with the ORIGINAL fuel injection principle

Eight months of successful field operation in California, while twelve months of experimental engineering tests were being conducted at our Olean factory, lends assurance to the operator that his choice of the Clark Super "2" is not merely the expression of his fancy for "something new."

As a result of the care exercised in perfecting the Clark Super "2" with the Clark Fuel Injector, it marks the greatest improvement in two-cycle engine design in two decades. Four-cycle economy with 2-cycle simplicity, in addition to increased power, smoother operation and greater capacity, are some of the advantages owners can expect from the Super "2", due to the Fuel Injection principle.

The Fuel Injector injects gas only to the cylinder which has previously been scavenged with air, just at the beginning of the compression stroke, when exhaust ports are closed. No raw gas escapes through ports. By all means, have our representative explain the operation of the Super "2", before you decide on your next compressor requirements. Clark Bros. Company, Olean, N. Y. Mid-Continent branch and warehouse at 125 W. First St., Tulsa, Okla. Other warehouses at McCamey and Sweetwater, Texas, and Artesia, N. M. Also Smith, Booth, Usher Company, 228 S. Central Ave., Los Angeles, and 50 Fremont St., San Francisco.

This mark identifies the The Clark Super "2" *ORIGINAL Fuel INJECTOR*

CLARK